

# Bird-Lore

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## Among the Bulrushes

By DR. FRANK N. WILSON, Ann Arbor, Mich.

With Photographs by the Author

ONE day in late May, while attempting to photograph a pair of Loons near whose nest my raft-blind was placed (see BIRD-LORE, Vol. XXXI, p. 95), I heard a loud splashing followed by the familiar *cow-cow-cow-cow-uh* of the Pied-billed Grebe among the reeds back of my hiding-place.

Some days later, when the Loons had departed with their young, we began a systematic search of the neighborhood for a Grebe's nest. At first there was nothing to be seen, but on May 30 we found a suspicious collection of dead reeds and decaying vegetation, about 7 to 8 inches in diameter, floating in a group of rushes to which it was attached. On June 3, a single white egg lay partially hidden in a slight hollow on top of this mass of material, which now rose some 2 inches above the surface of the water. Several rainy days followed, and we did not again visit the nest until June 7. There were now five eggs, and the Grebe had apparently left in haste, for they were not covered.

With some difficulty we moved the blind into the dense reed-bed and placed it about 15 feet from the nest. On the following day the reeds which prevented a clear view of the nest were removed, and on June 9 I was ready to take photographs. There were now six eggs, and the Grebe had again failed to cover them. I entered the blind, set up my camera, and peeped out through a small hole. Beyond and at both sides of the nest there was a perfect forest of bulrushes and water-lilies, so that my view was restricted to a space a few feet in diameter. Suddenly, and without warning, the Grebe's head popped out of the water just back of the nest; she glanced about, but seeing nothing suspicious, swam quickly up to the nest. A single hop and she stood on its margin. Her head flashed, now this way, now that, and four or five mouthfuls of rubbish covered the eggs in as many seconds. Then, as suddenly as she had come, she slipped into the water and was gone. She was soon back again, hopping about on the edge of the nest and pushing back the material that covered the eggs. Her agility was as surprising as the size of her feet with their cumbersome webbed toes. In a few moments the eggs were exposed, and she





PIED-BILLED GREBE

"ONCE SHE RAISED HER HEAD TO ITS FULL HEIGHT"





"SITTING CONTENTEDLY ON HER EGGS"

carefully settled herself upon them and pulled the loose material up about her. When she had made herself comfortable, she drew her head down, her long neck disappeared, and except for her flashing eye and black-banded white bill, she looked very much like a wet, dark brown, leather ball.

I spent the next half-hour taking photographs. Finally, in adjusting my camera, I made a noise which frightened her. She jumped up, threw two or three mouthfuls of rubbish on the eggs, and was gone. She soon returned and covered the eggs more carefully, and then proceeded to pile on the nest more decaying vegetation, which she secured by diving. It was not long before she was again sitting contentedly on her eggs. Once she raised her head to its full height and gave the characteristic Grebe call, but there was no response. When Mrs. Wilson came out for me with the boat, the Grebe quickly covered the eggs and left the nest, but she waited nearby until the boat came quite close before she dove and disappeared.



The following day I was back again; the Grebe's behavior did not vary from that already described. She piled more rubbish on the nest, and once she called *kuk kuk kuk*, but I saw nothing of her mate on this or on any other occasion—at least, I never saw the two birds together. Once, however, I suspected that the bird which returned to the nest was not the one that had left it without apparent cause a few minutes before.

I was in the blind again on June 11. While the Grebe was away, a medium-sized painted turtle climbed out on the edge of the nest. When the bird returned she paid no attention to him, but went about her business of putting more rubbish on the nest. Finally, finding him in her way, she gave him a hard peck and he departed. Some time later, when she was again absent, a large bullfrog selected the nest for a perch, but when the Grebe popped out of the water just beside him, he did not ponder the manner of his going—a mighty leap and he was gone.

We had now secured a good set of Grebe pictures, and since many days must pass before the eggs could be expected to hatch, we turned our attention to other subjects. We spent many hours on the lake, poling our boat through the reeds and wading among the cat-tails, but to our great disappoint-



"HER AGILITY WAS SURPRISING"





"THE MALE VISITED THE NEST BUT ONCE . . . AFTER THE EGGS HAD HATCHED HE DID NOT COME AT ALL"

ment we could not find either a Least Bittern's, Gallinule's, or Rail's nest, although we saw all of these birds at various times. Finally, we moved our blind over to a nearby Red-winged Blackbird's nest. Taking pictures of a Red-winged Blackbird did not promise much of a thrill after the Loon and the Grebe, but to an enthusiastic bird photographer, taking pictures of even the most common of birds is an exciting adventure. Small birds are not always more easily photographed than large ones; their rapid and jerky movements are often exceedingly troublesome. Sometimes they are so tame that it is unnecessary to use a blind; at other times they are surprisingly wary and suspicious. I know from personal experience that the Yellow-breasted Chat, for instance, is one of the most difficult of all birds to photograph at its nest. I had twice before attempted to photograph the Red-winged Blackbird; on the first occasion I secured fairly good pictures of the female, who was very tame; on the second the birds were so wary that the attempt ended in dismal failure. Individuals differ greatly.

On this occasion I hoped to secure photographs of the male. I spent two afternoons (June 15 and 22) at the nest. On the first day, when the nest contained eggs, the male visited it but once, apparently to investigate the cause of his mate's excitement. After the eggs had hatched he did not come at all; the female gathered the food and fed it to the young; she kept the nest clean; she brooded the young, protecting them from the hot sun. The male's chief

duty is apparently to remain on guard and display his masculine beauty. When someone comes near the nest, he appears at once and flies about from reed to reed, scolding and threatening, but the quiet and inconspicuous female does all the work.

On June 29 we moved the blind back to the Grebe's nest. There were seven eggs in all, and they showed no signs of hatching. The behavior of the Grebe did not differ from that of two weeks earlier. On June 30 a single egg had hatched, and the small striped youngster took to the water. On July 1 I again entered the blind with my camera. The young Grebe was nowhere in sight. All the afternoon I sat there and watched the six eggs and the broken shell, but not once did I hear or see the Grebe. When I came out I examined the eggs. One was chipped but the inmate was dead; a faint scratching could be heard inside another; the rest showed no sign of life. The nest was apparently deserted. For this disappointing outcome I can offer no explanation.



"THE QUIET AND INCONSPICUOUS FEMALE  
DOES ALL THE WORK"



## Birds' Eyes

By THOMAS HALL SHASTID, M.D., Duluth, Minn.

THE finest eyes in all the world are those of birds. Many birds, indeed, have sight one hundred times as sharp as that of men. Why is it that birds' eyes are so clear and strong, and what do we know of special interest about such eyes?

In the first place, it is absolutely necessary to understand that no eyes ever see. All eyes, from the cradle to the grave, or from the nest to the deep bed of forest leaves into which the dead bird falls, are blind utterly. Each eye is only a little living camera, not a picture-perceiving, but a picture-making organ. The two cameras shoot their respective pictures upward and backward along the fibers of the optic nerves to two little spots in the back of the brain (true of men and birds alike), and these spots, the so-called 'sight-centers,' are what really see.

Each eye is, as stated, a little living camera, a camera that can be pointed about in any direction by means of tiny muscles attached to it. Camera-like, there is a hole in the diaphragm (iris) of each eye, and it is through this hole (pupil) that the light enters the eye. The eye is just a thin-walled sac, filled chiefly with transparent 'eye-water,' and the light goes through this water, then through a convex lens, which makes the picture, and the picture falls on the 'retina' which corresponds to the sensitive plate, or film, in the back of a camera.

In man and bird alike the retina is largely a network of nerve fibers, but in man there are mingled with these fibers numerous tiny veins and arteries, and these, lying in the very substance of the retina, interfere with vision to a great extent. In birds' retinas, however, there are no blood-vessels at all, and this fact, in part, explains the much greater sharpness of the eyes of birds. The nerve fibers, too, and the 'end-organs' of the fibers are very much finer and more numerous in birds' eyes than in those of men.

But we do not need to rely on inference to know that birds possess the most remarkable vision in the world. Many years ago I tested Pigeons in a shed 70 feet long. Cutting from a grain of wheat a particle so small that it could scarcely be seen at a foot's distance by my own eyes (which are unusually sharp), I placed the tiny particle on a board of the same color as the grain at the far end of the shed. On each side of the board I laid ten other boards, all without any food upon them. At almost every test the Pigeons (eleven, each tested separately) after a few moments flew to the bit of grain and picked it up. A few could not do this unless placed near the food.

The Pigeons were tested separately because otherwise a very keen-sighted bird might, by flying first to the food bit, serve as a guide to the other Pigeons. None of the Pigeons had been fed on similar boards before the test. All the Pigeons were in a fasting condition. As nearly all birds are thought to have no sense of smell, only the birds' vision could possibly have been under test.



This experiment, with various modifications and with various species and varieties of birds, has been repeated by other observers than myself, and many kinds of birds have been found to possess much sharper vision than Pigeons.

Domesticated birds, however, do not always have keen sight. Wild birds are almost always far-sighted, but the house-bred species are often very short-sighted indeed. Not infrequently they had chorioiditis (a disease of the interior of the eye) also. This explains why, in my Pigeon experiment, three or four birds were found which could not see the bit of grain except when placed very close before it.

Short sight is one of the penalties which birds as well as men pay for 'civilization.'

Of sixty birds of various species whose eyes I examined on one day at Fairmount Park, Duluth, some years ago, sixteen, or more than 25 per cent, were not only short-sighted but had chorioiditis in addition.

The chief instrument with which we examine the inside of eyes, human or animal, is called the 'ophthalmoscope.' There is a little electric light inside the instrument, and, when it is turned on, it shines through the pupil and lights up the whole interior of the observed eye, at the same time magnifying everything there considerably. The observer's eye must be placed close behind the instrument, and the instrument itself close to the eye that is under examination.

From this necessity one might easily suppose that it is very dangerous indeed to the observer's eyes to examine the eyes of Hawks, Eagles, and the like, yet I have personally looked into the eyes of hundreds of such birds, examined them all I pleased, and, so far, have never even had my hand pecked. An assistant holds the bird with one hand by its legs and wings, with the other by its head and bill. At first the bird is almost frantic. But, before getting down close to its eye, I always reflect the light of the ophthalmoscope backwards and forwards, backwards and forwards, across the eye, and soon the hypnotic effect of light on birds becomes manifest. The flutterings diminish. The breathings become less frequent. And then I move up gently to the eye and peep inside of it through its pupil.

What, then, is seen? That depends wholly on the kind of bird. The retina and the end of the optic nerve (blind spot) always come into view, also a plume-like organ running from the back of the eye to nearly the front and called the 'pecten.' But these three organs present as great variety of size, shape, color, and marking as do the plumages of the widely different species. Dr. Casey Wood, in his book, 'The Fundus Oculi of Birds,' gives sixty-one colored paintings of the retinas, optic nerves, and pectens of as many kinds of birds.

How do birds see colors? In general, far better than do we. Blues, indigoes, and violets, however (the 'top' part of the spectrum) they do not see at all. Hence, looking at a distance, they do not perceive the blue haze which, as a rule, bothers the eyes of human beings very much. Then, again, they see colors below the red part of the spectrum, colors which, for us, have no existence.



This is one reason why many birds, Swallows for example, see very well late in the evening when the world is filled only with red and infra-red light.

Numerous experiments have been made by Hess, Casey Wood, myself, and others on the color sense of birds. Wood ('The American Encyclopedia of Ophthalmology,' Vol. II, p. 990) says of Hess's basic experiment on this head: "In order to determine the color vision of hens, Hess, by means of a mirror and an electric lamp of high power, projected on the floor an objective spectrum. This was spread over a darkened ground on which wheat-grains were distributed. The hens generally began to pick the red grains first and then the yellow and green grains, but the blue and violet grains they did not touch. The experiment shows that the hen sees the spectrum at the red end as far as we do, but at the other end it is much shortened."

Why do birds sleep with their heads tucked under their wings? It is said to be to keep their eyes from freezing. But not all birds so protect their eyes, even in cold climates, and the others carry out the practice in summer the same as in winter. Whoever can determine just why some birds 'hide their eyes' before going to sleep, while others do not, will be able to tell many new things about birds in general, as well as about their eyes in particular.



CRESTED FLYCATCHER LEAVING ITS NEST  
Photographed by Dr. Frank N. Wilson, Ann Arbor, Mich.



## The Last Heath Hen

By ALFRED O. GROSS, Brunswick, Maine

IN SPITE of the best efforts of conservationists, the Heath Hen has steadily decreased in numbers until, this year, apparently, but one bird remains. The death of this individual will also mean the death of its race, and then another bird will have taken its place among the endless array of extinct forms. The habit of the Heath Hen of congregating in open fields and the ease with which it was tricked and killed by the market gunners were contributing factors in its rapid decline after the white man and his firearms came to America.

By 1870 the Heath Hen was exterminated from the mainland and restricted to its last stronghold on Martha's Vineyard. It is remarkable that it has survived in that limited area for over a half century. The prolongation of the life of the species on that island has been due to the interest taken in it by the State of Massachusetts, conservation organizations, bird clubs, and individuals who have done all in their power to save the bird. The State Department of Conservation has expended \$70,000, and thousands more have been contributed by individuals in the unprecedented efforts to prevent the bird from being exterminated. Though the work has been in vain, it is a great satisfaction to us all to know that all that was possible has been done.

Attempts to transplant it to other seemingly favorable places and to breed it in captivity have failed. Efforts to increase its numbers on Martha's Vineyard by the establishment of a reservation in 1908 met with temporary success. The birds increased from less than 100 to an estimated number of nearly 2,000 in 1916. Unfortunately, a destructive fire swept over the entire breeding-area on May 12, 1916, which undid in a few hours the work of many years. The following spring there were less than 150 birds remaining, and the majority of these were males. There was a slight rally in numbers during the following few years, but the birds were too far gone to overcome the surmounting uncontrollable conditions of extensive interbreeding, declining sexual vigor, the condition of excess males, and, worst of all, disease. In 1920 many birds were found dead or in a weak and helpless condition, indicating that disease was then seriously exacting its toll. The birds continued to decrease in numbers, and by 1925 it was apparent that they had reached their lowest ebb in history. The Federation of the Bird Clubs of New England, Inc., then came to the front and offered to raise \$2,000 annually to support additional warden service. In spite of splendid coöperation, the birds, after two years of effort on the part of all concerned, continued to decrease.

The 1927 spring census showed 13 birds, 2 of which were females. In the autumn only 7 birds were seen, and in April, 1928, only 3 males remained. The following fall only 2 birds were seen, and after December 8 but 1 was reported. This bird was observed until May 11. Since that time it has not been seen. Is the Heath Hen now extinct? is a question we all are eager to have answered.





#### THE LAST HEATH HEN

Fortunately, this lone bird came near the blind to feed on the grain used to entice it there, giving the observers an opportunity to photograph the last Heath Hen in existence





#### THE LAST HEATH HEN

It is the first time in the history of ornithology that a species has been photographed and studied in its normal environment down to the very last individual



# The Migration of North American Birds

SECOND SERIES

## XL. ARIZONA AND RED-COCKADED WOODPECKERS

Compiled by Harry C. Oberholser, Chiefly from Data in the Biological Survey

### ARIZONA WOODPECKER

The **Arizona Woodpecker** (*Dryobates arizonæ arizonæ*) is a permanent resident in southwestern New Mexico and southeastern Arizona, south through eastern Sonora and Chihuahua to northwestern Durango, Mexico.

### RED-COCKADED WOODPECKER

The **Red-cockaded Woodpecker** (*Phrenopicus borealis*\*) is a permanent resident in the southeastern United States north to southeastern Virginia, northern Tennessee, southwestern Kentucky, and southern Missouri; west to eastern Oklahoma and eastern Texas; south to southeastern Texas, southern Louisiana, southern Mississippi, and southern Florida; and east to eastern Florida, eastern Georgia, eastern South Carolina, and eastern North Carolina. It is also of accidental occurrence in Ohio, New Jersey, and Pennsylvania.

## Notes on the Plumage of North American Birds

EIGHTY-FIFTH PAPER

By FRANK M. CHAPMAN

(See Frontispiece)

**Arizona Woodpecker** (*Dryobates arizonæ*, Figs. 1-3). The plumage changes of the two species of Woodpeckers figured in this issue of BIRD-LORE are so simple that there is little to add by way of explanation to Mr. Sutton's plate. Immature birds of both sexes of the Arizona Woodpecker have the crown more or less covered with scarlet, this color being deeper and more extensive in the male than in the female, and the spots on the underparts are usually less circular than in the adult. At the postjuvenile molt the plumage of the adult is acquired, the red crown being restricted to a nuchal band in the male and disappearing entirely in the female. In worn plumage, adults become bleached in appearance above, but beyond showing this effect of wear and exposure to light there is no further change in color until the succeeding molt replaces the old plumage with a new one.

There is a smaller race, *Dryobates arizonæ fraterculus*, in southwestern Mexico.

**Red-cockaded Woodpecker** (*Dryobates borealis*, Figs. 4, 5). Specimens of the Red-cockaded Woodpecker in immature plumage are so rare in most collections that it was not until after the frontispiece figuring this species was finished that I discovered one in the American Museum. As might be expected,

\**Dryobates borealis* of the A. O. U. Check-List (1910).



it was in the Dwight collection. This bird, taken at New Smyrna, Fla., June 13, 1899, has a broad band of scarlet across the center of the crown, the white areas are duller than in the adult, and the black markings duskier and not so sharply defined. According to Ridgway this is the plumage of the young male. The young female is similar but lacks the red band. Evidently, the dress of the adult is acquired at the postjuvenile molt and thereafter there is no color-change.

The red 'cockade' of the male is so inconspicuous that in the dried skin one has often to part the feathers to discover it.



### TREE SWALLOWS

At the end of summer, as the American tourists are flocking for their homeward voyage from Europe, other bands of tourists are gathering here for their annual excursion to the Gulf States and Central America. What more familiar sight is there than the great assemblies of Swallows about our marshes? Tree Swallows, though they find electric wires most convenient resting-places, are by no means averse to perching on bare twigs when they are available.—

JAMES P. CHAPIN, *Staten Island, N. Y.*



# Notes from Field and Study

## Translating Notes into Words

The song of the Brown Thrasher is easy to record if we but think of it as a one-sided telephone conversation, when it goes something like this, with each part repeated two or three times:

"Hello, hello, yes, yes, yes, Who is this? Who is this? Well, well, well, I should say, I should say, How's that? How's that? I don't know, I don't know, What did you say? What did you say? Certainly, Certainly, Well, well, well, Not that I know of, Not that I know of, Tomorrow? tomorrow? I guess so, I guess so, All right, All right, Goodbye, Goodbye."

Or it could be compared to a teacher calling the roll in this manner:

"Billy, Billy, Billy, Harry Jones, Harry Jones, Rebecca, Rebecca, Virginia, Virginia, Elizabeth, Elizabeth, Jonathan, Jonathan, Thomas Brown, Thomas Brown, Mary Lou, Mary Lou, Paul, Paul, Paul, Doris, Doris, Uncle Henry, Uncle Henry, Aunt Katie, Aunt Katie," etc.

I think bird-songs are a challenge to the world to 'keep off the grass.' Birds resent any intruder in their territory, and often we see them trying to chase out any other bird that tries to gain a foothold. I have imitated the Cardinal, House Wren, Baltimore Oriole, White-throated Sparrow, Yellow-breasted Chat, and other birds by giving their own calls and songs, and they have resented what they evidently thought was another male bird invading their territory.

I have called the Baltimore Oriole right up to the porch by keeping in the background; also had him fly all around my head when I whistled to him. He seemed to think I had the other bird hidden under my coat, and did not appear to be in the least afraid of me, acting as if he did not see me at all. I have seen the Wood Thrush, when called, get down in the path where we were and threaten to fight when he was addressed in his own

tongue. The Cardinal will come very near if I talk to him as he does to me. The Towhee, Brown Thrasher, Catbird, Yellow-breasted Chat, and many others will do the same.

I have called the Chat from quite a distance until he came to within a few feet of me as I sat in the car. He actually went under the car and came out on the other side; but I sat very still and watched him, and kept giving his low 'kuk' that seemed to be a dare. He showed no signs at all of fear.

On May 15 I was in the woods and sat on a fallen tree to take notes. In not over ten minutes I had the Indigo Bunting, Olive-backed Thrush, House Wren, Cape May Warbler, and Black-throated Warbler as my hosts—all at the same time! They were in the fallen tree, and the two Warblers, which have exactly the same habit of darting out and in after insects, came right up to me, not in the least afraid. The Black-throated Blue tipped his head to one side, looked up at me, and sang his little buzzy song, which seemed to say, "Hello, stranger." Twice I thought he was going to try to feed me a worm and a flying ant, as he came very near with them in his mouth, one at a time!

The Wood Thrush, found on or near the ground, says: 'Turalee' or 'tur ee,' with a double sound to some of his notes which can be played on the piano. His call-note is 'quit, quit,' or 'quirt.' The Wilson Thrush says, 'soo we', 'soo, weer' and it is very distinct to me. He can easily be imitated and will answer at once, as will the Wood Thrush.

The Redstart is found in low undergrowth or small trees, as a rule, and flits nervously about among the branches catching insects. He says 'A chee', a chee', a chee', or 'chee', a chee', a chee', as he suddenly darts out and back to the same spot, perhaps. He is easy to classify by the shape and markings of the tail even before he is in adult plumage.

The White-throated Sparrow gives several songs, but when studied carefully one may



be able to recognize any of them. Some of his music goes like this: 'Too, tee, te-te-te-te,' or 'Te-te-te-te, too-o, too-o, too-o,' the last in a trembling tone. Or I have heard him say, 'Too hoo, too he, too he, too he,' or 'te-a, te-a, too, too, too,' etc.

The Goldfinch says, as he flies in waves across the fields, 'one two three four, one two three four,' or 'te-te te-te,' in a very pleasing and sweet voice. He sings a varied song and sometimes says, 'Choo-choo-choo-choo'; chooie, chooie, chooie, chooie' with force and vigor. It is sometimes similar to that of the Indigo Bunting who says with force: 'Chee-a, chee-a, chee-a, chee-a, chee-a, chee-a, chee-a,' and often adds a note or two after you think his song is ended.

The Maryland Yellow-throat generally says, 'Wichety, wichety, wichety' either three or four times, but I have heard him say very plainly 'Too whee'dle, too whee'dle, too whee' in my own yard, and I would not have believed it if I had not seen him and heard him sing.

The Rose-breasted Grosbeak has several songs, most of which are very sweet and pleasing, with notes similar to those of the Robin, but not given in the same order. I have recorded some of his music which is like this: 'A whee, who; a whee who; a whee who,' given three times and in a very sweet tone, with no harsh notes. I have also heard him say 'Dearie dear, dear o dear; dearie dear, dear o dear; dearie dear, dear o dear; dearie dear, dear o dear' just as distinctly as if he talked in my own language, giving his song four times alike.

Then one very sweetly said, 'I'm glad to see you, I'm glad to see you, I'm glad to see you,' as the most cordial hostess might say.

Once I heard him say in the tone of some of the Warblers, with a voice similar to them, 'Ze, ze ze ze ze, ze', 'ze ze ze', so am wondering if he does not imitate some of his neighbor's songs as he seldom sings twice alike.

The Towhee says, 'Tee', 'who';—te te te te', the latter part given either four or five times with the accent on the last syllable. This is exactly what he generally says, the first two words emphasized and spoken slower than the last four or five, which are alike.

The Field Sparrow says, 'De a, de a, dea,

de a,—de de de de de.' The Yellow Warbler says, 'Chee! Chee! che-che-che-chee!' The Yellow-breasted Chat says several things, some of which are the following: 'Tut-tut-tut-tut-tut-tut-tut-tut,' then 'Ur-ur-ur-ur-ur-ur ur ur,' rather rapidly and with force. He may be heard for quite a distance through the wild, tangled underbrush where he is generally found. He often gives a single call-note which sounds something like that of the Red-headed Woodpecker or Crested Flycatcher; as 'Ur,' then soon will give his loud notes about *eight times* (once gave them twelve to sixteen times). He also has a soft call 'kuk,' which if repeated will sometimes get him to come within a few feet of the observer.

The Black and White Creeping Warbler says, 'A wichie, wichie, wichie,' and is most often found upon the trunks of trees.

The Cape May Warbler says, 'Soo we', chee chee', ch-ch-chee'! The Red-winged Blackbird says, 'Konkeree'! and 'ske'er,' and other notes. The Red-headed Woodpecker says, 'Error, error, error,' which makes him one of our most polite birds to thus apologize so often! His call-note is 'ur.'

The Crested Flycatcher says 'Ur,' slowly, at regular intervals, and not so rapidly as the Chat; then says, 'Ter whit, Ter whit,' loudly.

The Black-throated Blue Warbler says, in a weak and buzzy tone, 'Swee, chee' e,' which disappoints one when comparing his song with his beautiful plumage.

The Ovenbird says, 'Teacher' about six or more times, getting louder with each word, and is most often found on the ground or in a low tree or shrub.

The House Wren gives two notes running into a trill. Most of us know his song. The Carolina Wren says, 'Whittley, whittley, whittley, whittley,' with force. Bewick's Wren generally says, 'Too whee, too wheedle,' or 'Come here tomorrow'; and the Long-billed March Wren says 'Tut-tut-tut-tut-tut-tut-tut-tut,' which sounds as if one were pounding two rocks together.

The Scarlet Tanager says, 'Cheer, cheery cheer, cheer cheer cheery' in a tone something like the Robin's or Rose-breasted Grosbeak's.

The Cardinal says 'Whee' oo, whee' oo,



whee' oo,' or 'who ee', whoo ee', with a sharp chip for a call-note. Sometimes he says, 'Wet year', wet *year'*, or 'Good cheer, good cheer.'—MRS. H. P. COOK, *Anderson, Ind.*

#### The Division of Food to the Young

Often have I heard people exclaim, upon viewing a nest of birdlings, "They all look alike, and how can the parents tell which ones they fed last?" The question is often answered as is the one pertaining to a pair of birds building their first nest, "It is done instinctively." Last summer, however, while closely observing a Barn Swallow's nest, I drew a different conclusion.

The facts in the case indicated that the food distribution was governed by the young birds themselves rather than by their parents. They were nourished according to their appetites, and unless feeling a desire for food, none would be given them.

The young birds would be made aware of their parents' presence by the sound of their beating wings as they approached the nest or by their perching thereon. Immediately, one, two or three heads would bob up and as many gaping mouths would be opened. Invariably, the first mouth opened received the morsel of food. The parents had no patience with those belated birds who only half-heartedly raised their heads among their greedy brothers. Each bird, after being fed, subsided complacently into a deep sleep and was seldom aroused by the next appearance of the parent at the nest.

Thus each bird bided its turn for food, each governed its supply by the impelling motive of hunger. Those most recently fed were least eager for nourishment, and their hungrier brothers usurped their chances.

Now this process of feeding did not occur with the regularity of the clock's tick. Sometimes the parents came early, sometimes late, and occasionally the birds were fed out of their turn. This may have been due to the reception of larger tidbits of food upon previous feedings,—or it may have been due to the prolonged absence of the parents.

It is safe to say that the division of food for half a day was so well proportioned that each bird received practically the same

amount of food. At least, they grew with uniformity and seemingly deserted their little mud home at approximately the same hour.—UNCAS M. MCGUIRE, *Nelson, Mo.*

#### A Resident of the Snow-caps

On July 5 and 6, 1928, my father, brother, cousin, and I went on our third annual pilgrimage to Mount Evans, a prominent peak in Colorado, with an altitude of 14,330 feet. We went on horseback and took two days for the trip.



WHITE-TAILED PTARMIGAN

We spent the night at timber-line where White-crowned Sparrows sang sweetly from the tangle wood; Western House Wrens scolded and sang; a solitary Robin called lonesomely from a dead tree, and soft calls of *Whew whew* told of the presence of the Mountain Bluebird.

Very early the next morning we continued our journey. We had thought that the weather was going to be fine, but a cold wind rose just before sunrise and whipped fiercely down the draws, and it was terribly cold. Even the Pipits did not sing. I do not believe I heard a Pipit's whole song during the trip, although we found two of their nests. One under a slanting rock contained five eggs, and one in a hole in the ground had six eggs.

As we were passing the last remnants of tangle-wood, a White-tailed Ptarmigan flew up and away, squawking like a frightened Guinea Fowl. When we had passed, the bird

flew back and was joined by another Ptarmigan. We thought she might have a nest nearby, but we did not see her on the return trip.

We finally stopped behind a pile of rocks on the side of Mount Epaulet and built a fire with some pitch chips we had carried with us up from timber-line. We were camped near the edge of the mountain where there is a plunge of about a thousand feet or more into a great valley.

Father had gone over to this side when he called me. I was sure I knew what he had found, for I had been hoping to get a close-up of a Ptarmigan. Sure enough, there was a male Ptarmigan trotting away down the side of the mountain. I was eager to get pictures of him.

Junior and I proceeded to keep him from wandering off while the camera was brought and the films put in it. When he found his way of escape cut off, the little fellow looked us over, picked up a few particles of food, and fluffed his feathers. He was very tame and permitted close approach.

When we were ready to photograph him, he ran a little ways down the side of the mountain and stopped on a rock beside a big patch of snow. Here we secured two pictures of him, and then he hurried away over the snow.

It is a treat to the nature-lover to see such a tame bird. Our present-day civilization has changed many of our formerly tame birds into wild and suspicious ones. But it is unlikely that the Ptarmigan will ever meet such a fate. In their wild and remote habitation, and with their protective coloration, the Ptarmigan will probably continue their lonely life and tame, inoffensive habits for years to come.—CATHERINE ALICE HURLBUTT, *Pine, Colo.*

#### An Osprey Feeds on Ducks

In the Somerset Hills the Osprey is seen quite frequently, and, as elsewhere, is generally regarded as a bird to be protected. So the following incident concerning this supposedly harmless Hawk seems to be of unusual interest.

In the Game Park on our place there is a

small pond where we keep a number of water-fowl. Naturally, we are constantly on guard against the more predatory species of Hawks but the appearance of the Osprey, one day in late summer last year, did not arouse any suspicion.

The bird first appeared on Saturday afternoon, August 18, and for some time circled high over our little lake, gradually narrowing the circle and dropping lower. The water-fowl, at first sight of the Hawk, had bunched closely together toward the center of the pond. At length the Osprey swooped down, seizing one of the young Ducks.

Our gamekeeper, who was watching, had no gun with him when this happened, and the marauder quickly disappeared and did not return again that day. However, the following day, the Osprey came back to the pond and was watched by the gamekeeper for nearly an hour, but he circled high and warily and did not come within range. Later in the afternoon the bird again reappeared and, after circling the pond several times, finally swooped toward the huddled bunch of Ducks and snatched up a half-grown Mallard.

The pond is situated near the main road, and, as often happened on a Sunday, several cars were parked along the highway by the enclosure and the motorists were watching the water-fowl.

The gamekeeper, who this time was waiting with his gun, was on the opposite side of the pond and was forced to delay, for fear of accident, until the Osprey had risen to a height of some 30 feet before firing. The Fish Hawk, as he fell, dropped the Duck, which was afterward ascertained to be alive and unhurt.

Later, when the Osprey was measured, his total length was found to be 23 inches, with a wing-spread of 67 inches. On account of the large size we judged the bird to be a female.

I can think of no reason for the Osprey turning to this form of food. There are several small lakes and marshes in the vicinity abounding in fish—indeed, there were fish in this very pond—so this cannot be attributed to a dearth of the Fish Hawk's customary food.

Never before have I heard of any instance



of this sort in connection with the Osprey. Also, since then, I have read all the accounts of the habits and diet of this Hawk in several bird books, none of which mention that the Osprey ever disturbs game or water-fowl. Among the books which I have consulted are: Eaton's 'Birds of New York,' Griscom's 'Birds of the New York Region,' Audubon's 'Birds of America,' and Forbush's 'Birds of Massachusetts.' The last-named writer especially states that "All available evidence points to the conclusion that the Osprey is harmless to poultry, birds, and game."—CYNTHIA DRYDEN KUSER, *Bernardsville, N. J.*

### A Glimpse of Owl Life

It was well after sundown one evening in the early part of the past winter that I had the good fortune to witness a little drama of wild life that I would not have missed for a good deal. I was quietly picking my way eastward along the rocky bed of a rather deep and narrow canyon down at the southern edge of the Capitan Mountains of New Mexico, intent on getting back to my camp near the Padilla Ranch house about a mile beyond, when I heard the weird, thrilling *whoo-whoo-whhuu* of an Owl ahead of me and somewhat to the left.

I could not see the bird at first, because of the tall pines and overhanging oak brush that intervened, so I followed the haunting calls up out of the canyon to more open country, creeping cautiously along that I might not alarm him. Directly I peered from a clump of low juniper bushes and saw, about 20 yards to the west, the tall, nearly branchless trunk of a dead yellow pine, its upper part sharply outlined against the cold, clear, roseate sunset sky beyond. And there, perched side by side on a stub of a branch jutting out to the north, way up near the top, I beheld two very large and magnificent Western Horned Owls, the big tufts of feathers on their heads standing up like the ears of a cat, and their big yellow and black eyes glowing as they faced my direction. The pair had not seen nor heard my approach, so were unaware of my nearness, as I knew by their actions. I quietly watched them.

In a moment one of the pair suddenly

tipped head downward on the branch until his beak was a bit lower than the level of his feet, drooped his wings, thrust up his short tail, and fluffed his soft feathers, making him appear even larger than he was, and at the same time poured out a long-drawn, haunting, thrilling, quavering *hoo-hoo-whooho-uhuhuuhuu-whhhhuuu*. As the call ended he (or she) at once popped back into upright position on the stub again.

Immediately, the other Owl fluffed its feathers and tipped forward and downward and hooted as had its mate, though I could easily detect quite a difference in the calls. It swung back upright again, and I could plainly see one and then the other snap his curved beak sharply and could hear the clicking of them on the crisp air.

Then, as if by some sign, they simultaneously turned their broad 'faces' to each other and began rubbing their beaks together, for all the world as if they were kissing and making love, much after the fashion of Pigeons and Doves. A few seconds of this, and they both swung down on the stub at the same time and hooted their eerie calls again. Then they straightened up and billed some more.

For several minutes they kept up this unusual performance, alternately hooting and billing, sometimes one hooting at a time, sometimes both at once, and always there was the snapping of their beaks mixed in.

Once a prowling coyote made a slight rustling in the sere oak leaves as he slipped through the brush in a small ravine several yards to the rear of them. One of the pair caught the faint sound and stretched up tall and twisted his great head about until he could look down over his back to learn the cause of the slight disturbance. His mate caught the cue and did likewise.

I could tell by their actions that they had discovered the animal at once, but the pair seemed to realize that a coyote could not climb trees and would be unable to get at them way up there on the dead stub 60 feet from the ground. The coyote prowled on up the ravine in the deepening gloom and in a few moments the two settled back to their courting once more, evidently no longer concerned about the animal.

I watched there till the shadows in the canyons and thickets grew black and mysterious and night had settled in earnest. Then, after a bit, I tried a new tactic. I hooted, quavering, long-drawn-out, as nearly as I could imitate their weird calls. They did not seem alarmed, but were immediately attentive to the sound. First one, then the other, would answer me, but they ceased their billing and love-making.

After a few minutes of this, I slipped from cover out into the open where they could easily see me. Instantly they were alert and sailed off into the gloom on fluffy, silent wings, away from the menace they instinctively realized might harm them even in their elevated position.—CHIEF RED EAGLE, *Roswell, N. M.*

#### A Barn Owl Guest

In a huge maple tree on the slope of a ravine which is our side yard, a Barn Owl spent an entire day on September 18, 1925. This was the only Owl of this species that I have ever seen during the six years I have lived at Norton's ravine. The weather was very hot and sultry, and *pratincola* had perhaps chosen this perch with an eye to comfort. Any stray breeze stealing through the ravine would surely find the bird, seated well up in the tree and far out on a long, bare branch, the only foliage near the Owl being a spray of two or three leaves that dangled before his face. This odd face was lighter in color than the ochre-buff of the body feathers, but outlined with the darker color, while an occasional dark speck flecked the feathers of the body.

As I approached his perch at 8 A.M., the Owl, looking down at me and stirring slightly, uttered a few faint tremulous and not unpleasant notes, *Aek, aek* or something similar. This note, in almost a beseeching tone, was his only utterance during the day. Throughout the morning the bird sat still, stiffly elongated, without change of posture except to turn his head and watch, sleepily, an occasional movement in the yard. So near the house was the perch and so open, it was easy to observe the bird from the door, but 1 o'clock found me seated on the hillside

beneath the Owl, resolved to outstay my guest. For hours he continued to doze with half-shut eyes. He was easy to rouse, but remained fully awake only a few minutes at a time.

At 5 P.M., after a slight shower, a cool breeze came through the ravine and the heat began to abate. The Owl felt this change. He suddenly slumped in his seat, settling several inches until the maple leaf that had dangled at his chin now cleared his head entirely. Ruffling out his feathers until he looked almost as broad as long, and leaning forward, the Owl fell into a profound sleep lasting an hour and a half, his head gradually falling sidewise like Grandfather asleep in his chair. So deep was this slumber that no movement in or under the tree aroused the bird in the least. A Blue Jay, arriving at this time, inspected his ancient enemy from all sides, then looking curiously at me, seemed to consider calling his comrades, but departed leaving the Owl unconscious of the visit. Across the ravine a dairy boy came crashing on his pony looking for cows, but even this noise failed to arouse the heavy sleeper on the limb.

Not until after sunset did the Owl awake. Then he opened his eyes gradually, lifted himself slightly, looked around sleepily, tilted his head backward and forward a few times as though to get the kinks out of his neck, and finally opened his bill in a most human-like yawn. Next he looked down on me for several minutes in a speculative sort of way, then, leisurely lifting his wing, began to preen. No barnyard hen would have been so indifferent to the hostess under the tree.

But as twilight came on the Owl's manner changed. Indolent indifference gave way to alertness. Grasping the limb, he leaned forward and downward while his body swayed as he scanned the hillside with dark, gleaming eyes. Even after darkness had settled throughout the ravine, the bird's dark body was easily discerned moving against the afterglow. Finally, came a rustle among the maple leaves, then all was still, and listen as long as one might, the ravine gave no further sign of the Barn Owl.—

MARCIA B. CLAY, *North Bristol, Ohio.*



### A Nighthawk Courtship

The courtship of a Nighthawk attracted my attention as being somewhat different from that described in Forbush's 'Birds of Massachusetts.' The author of that book says, "In the mating season the male often rises to a considerable height and then falls swiftly, head first, with wings partly closed until near the earth, when, spreading his wings, he turns upward, producing with his primaries a resounding *boom* which may be heard a considerable distance."

The Nighthawk that I observed performed by swooping downward 20 to 30 feet with unbended, extended wings held up at a 45-degree angle. Then the wings were bent, the humerus and secondaries being held raised as before, but the primaries were pointing downward and outward at a right angle to the secondaries. With the wings in this position, the bird continued volplaning about 10 feet, making a loud, booming sound until an abrupt, upward turn was made. The sound, to me, was like that of the lips vibrating when blowing against the palm of one's hand. The noise was produced after bending his wings on the downward swoop. This whole performance was made over a high school building every few minutes for some time between 7.30 and 8 o'clock for several evenings.—MERRILL WOOD, *Harrisburg, Pa.*

### Cardinal vs. Catbird

Between May 12 and 20, I noticed a pair of Catbirds in a particular thicket on several occasions. On the morning of May 20, I happened to discover their nest, which was made of twigs and dry leaves. It was in the center of the thicket, about 3 feet from the ground, and was practically complete.

While I was still in the vicinity of this thicket, a pair of Cardinals arrived. The Catbirds, which had disappeared while I was examining the nest, returned a few minutes later, but the male Cardinal gave chase and they were forced to flee.

Presently, both Cardinals left the thicket and the Catbirds returned. The female entered the nest while the male remained nearby. In about ten minutes I caught a

glimpse of a flash of red through the trees. Once again the Catbirds were forced to withdraw.

The female Cardinal then entered the nest and proceeded to make herself at home. Having decided to make several changes, it was necessary for her to make four or five trips in order to gather additional material. On each flight she was accompanied by her mate. The male, however, did not carry any twigs or leaves to the nest. While the female worked steadily in her new home, the male sat on a nearby branch and sang most beautifully.

I did not have an opportunity to visit the nest again until the morning of May 22. As I approached the thicket, I noticed it was deserted. Upon scanning the nest I found the egg of a Cowbird.

On the morning of May 23, the Catbirds returned. After examining their home, they again disappeared. The nest was in the same condition as the previous day and contained but one egg.

Neither pair looked with favor upon rearing the intruder. As a result, the nest was permanently deserted.

We, in Canada, have little opportunity of observing the Cardinal, and I have been wondering whether the dispossessing of another bird is one of its common traits.—W. MCLEOD ORFORD, *Toronto, Canada.*

### A Homing Bullfinch

Do all wild birds prefer to be at large? Here is a case in point that seems to prove some birds appreciate confinement, if not too rigid.

A Scotch gentleman has a number of once-wild Bullfinches who are now allowed their liberty, but they have become so tame that they return to their house at night.

But I'll let the owner tell his own story: "Last spring all of my Bullfinches but one mated. This bird, whose name is Bulldog Drummond, did not return one evening. For a time no attention was paid to the absence of Drummond, but as the days went on without his appearance, I concluded that a prowling cat or, perhaps, a sling-shot boy, had ended his career. But I was mistaken.

"One afternoon, a few months later, I heard a tapping on the glass of my bird-house, and, on investigating, to my great surprise, I saw Bulldog sitting on the ledge and displaying extreme eagerness to gain admittance. Of course, I let him in and he began to behave in a manner that clearly showed his delight at being back in his own old home.

"But that was not the best of it.

"After a short talk with me, he flew out to a nearby tree, and, on my following him, I saw an adult hen and young male Bullfinch, toward both of whom he was using every wile to get them to enter the house. At last, after considerable coaxing, Mrs. Bullfinch did so, Master Bully, however, refusing to be cajoled into captivity—as he supposed. After looking—rather longingly, I thought—at his parents, he flew off and never returned.

"Now the new hen Bullfinch is as tame as the others, coming and going at her own sweet will."—WILLIAM N. CRAIGIE, *Fairbanks, Alaska*.

#### Rosy Finch, the Mountaineer

An alpinist by nature, the little Rosy Finch is the beloved friend of all true mountaineers. This intrepid explorer of lofty heights is an inspiration to all those ambitious ones who venture above timber-line. At home is he on the upper reaches of grinding glaciers, rocky moraines, wind-swept ridges, alluring culs-de-sac, rugged cliffs, and crags. In this high-altitude world of his, the Rosy Finch neighbors with the mountain goat, the whistling hoary marmot and the White-tailed Ptarmigan.

Occasionally this brave little bird has been seen as high as 12,000 feet above the sea on the icy shoulders of the mountain monarch of the West, Rainier, which towers 14,408 feet above sea-level. As a mountaineer the Rosy Finch holds the high-altitude record of Rainier National Park. He has also been discovered just below the crest of Mount Whitney at an altitude of 15,000 feet. This spirited little explorer takes to lofty mountain crests, peaks of rock and ice, as blithely as a Duck takes to water or a Water Ouzel to a rollicking mountain stream. The hospitable alpine meadows in the zone below, flaming with flowers of every hue and butterflies to

match, fail to persuade the Rosy Finch to abandon his lofty life of solitude. When the wind is sharpest and his toes are coldest, he cuddles up to the leeward side of a granite boulder or a block of ice until he gets a new lease on life.

The Rosy Finch wrests a living from his lofty snowfields by capturing benumbed and helpless insects and seeds that have been deposited by winds friendly to the maintenance of the Finch family. Insectivorous is this independent alpinist. Grasshoppers and other insects well frosted constitute his daily diet. We suspect, however, that he also feeds on far-flung views of scenic grandeur, panoramic vistas that make even frozen grasshoppers seem tame.

He builds his nest and rears his family of young alpinists in the niches of the lofty cliffs where enemies are few and far between, other than the blustering blizzard that swirls in and out his door now and then even in summer. With the arrival of bleak November the Rosy Finch descends to his winter quarters at timber-line.

He is not a singer of great ability, and yet his single note rings with cheer and good tidings. The weary mountaineer who hears it just below the summit taps a new reservoir of courage for the final test of endurance, the final challenge.

Some 6 to 7 inches long, the Rosy Finch wears a cloak of deep chestnut-brown, with a black vest and a gray-black stocking-cap for arctic weather. This modest little mountaineer likes a dash of old-rose in his summer costume and a dash of snow-white in winter. His winter bill is black and his summer bill is yellow with a black tip.

The Rosy Finch, or Mountain-Finch, is a member of the genus *Leucosticte*, of which we have two species and several races. These form a clan of courageous mountaineers that are at home on the dazzling summits of the Rockies, the Cascades, the Olympics, and the Sierra Nevadas.—HARRIET GEITHMANN, *Seattle, Wash.*

#### Two Grosbeaks at Watkins Glen

The Evening Grosbeaks visited the village of Watkins Glen early in the spring of 1928 and were seen by three members of our Bird



Club. The numbers varied from one male and one female to a flock of thirteen, most of which were males. They were not known to have visited any of our feeding-stations, and I was not fortunate enough to see any of them myself.

Also, a male Cardinal spent the winter in Montour Falls, 3 miles south of Watkins Glen, and fed nearly every day in a yard with Blue Jays and Juncos. He disappeared early in the spring.

This is the first authentic report of the Evening Grosbeaks for our village, but Miss Martin, another member of our Bird Club, and I saw a male Cardinal early in May, 1913.—GRACE L. WHITE, *Watkins Glen, N. Y.*

#### Prothonotary Warbler in New Hampshire

Among the accidental bird visitors at Concord, N. H., this spring, supposedly blown north by some of the heavy storms of the season, a Prothonotary Warbler aroused the most interest. This bird was discovered by J. J. Welsh of St. Paul's School, on May 22, at Sanborn's Pond, a small, deserted quarry-hole, draining down over a swamp covered with alders and light deciduous growth. The bird was not at all shy and remained in this spot for four days, frequently singing its rather harsh, strident song. It had all the characteristics of the male Prothonotary, and as it was under close observation for four days by such skilled observers as F. B. White, Mrs. A. T. Peck, and Messrs. Welsh, Ripley, Morgan, Rodd and others, its identity seems to be established beyond a doubt. It is thought that up to this time there is no New Hampshire record of this bird.—G. P. MILNE, *Concord, N. H.*

#### A Bewildered Marsh-Tit

The birds have become very tame and friendly here, owing to a shallow bath on the broad outer window-sill, hanging bags of

food, and scattered nuts. Many eat from my hands and enter the room freely. This morning I was wakened at 6 by an unusual noise and saw a Marsh-Tit (*Parus palustris*) fluttering before a long mirror on the wall, singing in a way I had never heard before. Entranced, I watched. He would perch on a chair-back and look at his reflection directly in front of him, then fly to it and peck the glass gently, then again flutter on the mirror up and down its 3-foot length, singing steadily this (to me) unknown song—then settle on a chair or table near it in silence, alert and puzzled, only to begin again. This continued for half an hour—at times he would fly out of the window behind the wall on which the mirror hangs, to return immediately and begin the search anew, at times perching on an ornament hanging next the looking-glass, from where, by stretching his neck, he would meet his reflection, and then the singing flight, up and down its surface, would be resumed. There was never a sign of fear. At first I kept silent, but at last called and talked to him. From time to time he ate a morsel of scattered nuts, but in the main he was concentrated in the search for this elusive mate. His whole small body seemed consumed with baffled bewilderment, and after the later assaults on the mirror, he would stand panting with distended bill. At last he flew off, to return in about half an hour and repeat the entire performance which has continued all day at intervals, for the same length of time. Being confined to bed, which is near to and opposite the mirror, my books and letters were neglected, the Chaffinches and Great Tits barely noticed when they came in to feed, during the absences of this always loved little creature, as I eagerly waited for his hoped-for return, which never failed, when I was an absorbed and fascinated spectator of these most interesting, unusual and lovely manifestations.—MRS. W. BRENTWOOD SMITH, *Vevy, Switzerland, May 6, 1929.*

## THE SEASON

Edited by J. T. NICHOLS

LXXIV. April 15, to June 15, 1929

The present period, which covers the main northward movement of bird hosts, was abnormal in the eastern part of the country, where, in general, unseasonably warm weather in the preceding period, correlated with advanced vegetation, was followed by unseasonably cool weather. Migration was doubtless also complicated by a storm of marked severity which curved northeast from Texas to New England in mid-April, raking various of the Gulf and Atlantic States. Reports indicate an unusually advanced migration at the beginning of the period, which persisted in the arrival of certain species ahead of time, even after the turn of the weather. From Boston to Washington, D. C., the normal 'waves' of May migrants were less well marked than usual; and the direct effect of the storm brought various small land-birds as strays to New England in late April, such as the Summer Tanager, only a stray there from the south, and the Indigo Bunting, not due to appear until later. Careful compilation and study of this spring's migration and weather data might prove exceedingly interesting.

**BOSTON REGION.**—The storm mentioned in my last report, which reached New England on April 16, brought us some very interesting bird visitors. According to the Weather Bureau maps, this storm first appeared as an area of low pressure in Texas on April 13. This depression moved about due east across the Gulf States to near the Atlantic coast and then turned nearly north, reaching New England April 16 and passing out to sea over Nova Scotia. As the storm passed across the Carolinas or Virginia, it apparently picked up a number of species of migrating birds and later deposited them in New England.

On April 17, F. A. Foster telephoned me from Martha's Vineyard that a male Summer Tanager and a male Indigo Bunting were feeding together at his birds' lunch station.

This was nearly a month earlier than the Bunting's usual date, and the Tanager is only a rare straggler in New England. On April 20, a letter from the warden at the Heath Hen Reservation on the Vineyard reported two Summer Tanagers, two Scarlet Tanagers, and an Indigo Bunting; another letter reported a male Summer Tanager picked up dead at Chatham, and my son Richard brought me a male which he picked up in Cohasset. The next two weeks brought additional reports of Tanager from the Vineyard, and scattering reports from Cape Cod and Nantucket, and even as far north as Bar Harbor, Maine. In several instances it was impossible to determine the species, but there were apparently about twice as many Summer Tanagers as Scarlet Tanagers. One of the latter was reported from Lewiston, Maine, and one from Bar Harbor, while a Summer Tanager and a Cardinal were seen near Portland. Other southern species reported soon after this storm were a Worm-eating Warbler seen by Messrs. Conkey, Clark, and Perry at Ipswich on April 19, and by Mr. Emilio on April 20, at which latter time three Indigo Buntings and a Wood Thrush were also noted; a Hooded Warbler, April 19, and a Purple Gallinule on Martha's Vineyard April 18; a Blue Grosbeak at Block Island, R. I., April 18, where Miss Dickens also saw a Chimney Swift, April 21, and noted Baltimore Orioles, Kingbirds, Scarlet Tanagers, Rose-breasted Grosbeaks, and Towhees, all far ahead of their usual dates; and a Yellow-breasted Chat at Amherst on April 22.

It is interesting to compare this visitation with that of a year ago, when we received several reports of Glossy Ibis, Little Blue Herons, Yellow-crowned Night Herons, etc., but very few of small land-birds. This year a Little Blue Heron was reported at Bar Harbor, Maine, on April 27, and one at Rockport on May 1; an American Egret was seen at the Vineyard on May 3 and one at



Ipswich on May 5. While these may have been brought north by the April storms, most of the reports this year were of small land-birds. Many were picked up dead and were brightly colored birds, and the majority were found very near the seacoast. The loss of birds at sea and among dull-colored birds on land may have been much greater than the number of birds reported.

Another item of especial interest for April is the taking of a Harris's Sparrow at Hingham on April 21. On April 11, a bird of unknown species was observed at the feeding station of Mr. and Mrs. Fred G. Floyd at Hingham, where it remained for ten days. Mr. Floyd telephoned me a description of the bird on April 20 and it was collected next day for the Boston Society of Natural History. This is the first specimen of Harris's Sparrow ever taken east of Ohio and Ontario, I believe, and by an interesting coincidence it will occupy a place in the museum beside the first New England specimen of the Golden-crowned Sparrow, which I also collected a little over a year earlier.

Eight Loons were seen at Duxbury on May 25, two at Ipswich on May 30, and pairs are thought to be breeding on one or two lakes in western Massachusetts. Two Red-throated Loons were also seen at both Duxbury and Ipswich on the above dates. A Glaucous Gull was seen at South Boston on May 21 and a Caspian Tern at Ipswich on May 12. Least Terns are reported as breeding in small numbers at many places along the Massachusetts coast, and an exploration of rocky islets off Essex County by Richard Eaton revealed some 285 occupied nests of the Herring Gull. A few years ago the Herring Gull was not known to breed in Massachusetts, but it is now nesting at several points south of Cape Cod.

Two pairs of Canada Geese abandoned the northward flying flocks and attempted to nest on lakes in Connecticut this year. One pair were apparently successful but the other pair were found and the Goose was killed on her nest, at an expense of something like \$87 in fines. The killer hired a boat from the local game warden for the expedition and foolishly left telltale feathers in the boat.

On May 20 a pair of Purple Gallinules

were seen near Amherst which, from their actions, were undoubtedly mated and nesting there but the nest was not located. A Florida Gallinule was found dead near Holyoke on May 12, and one was captured alive at the Charlestown Navy Yard on June 15 and presented to the Aviary in Boston. On May 3, between 500 and 1,000 Northern Phalaropes were seen at East Haddam, Conn., and several hundred were reported at Chatham the next day. We have several other reports of single Phalaropes, one of which was probably a Wilson's, though the identification was not perfect.

Mourning Doves are apparently increasing in Massachusetts, and a pair were seen feeding their young in a nest at Waltham in May. Conditions seem to have been favorable for the Ruffed Grouse breeding, and we have several reports of successful hatchings.

A Turkey Vulture was seen in Hopkinton early in May. A Saw-whet Owl was noted by many observers in the Boston Public Garden on April 29.

The migration of land-birds has been rather long drawn out, with numerous species reported at early dates but with little or no marked migration waves. A heavy snow-storm about April 12 and 13 caused great destruction among certain species of early migrants, notably Bluebirds and Tree Swallows, which had already begun nesting, but also including Robins, Flickers, Grackles, and several other smaller species.

Among Sparrows, the abundance of the White-crowned has been most marked. On May 18, Dr. Townsend and Mr. Emilio saw a pair of Rough-winged Swallows carrying nesting material into a hole in a bank in Middleton. Unfortunately, the nest was disturbed and abandoned, spoiling what would otherwise have been the first breeding record for eastern Massachusetts. A Migrant Shrike was seen near Worcester on May 19.

We have received several reports of Worm-eating and of Prothonotary Warblers from persons in whom we have much confidence, though none of the birds were collected. One of the latter species was from New Hampshire. A Cerulean Warbler was seen at Holderness, N. H., on June 5 and 6 and was taken June 8, the first authentic

record from the state, we believe. A Hooded Warbler was seen at South Hadley, Mass., on May 11, and a Yellow-throated Warbler at Milton on May 13. On May 25, a Lawrence's Warbler was seen at Athol, and the same observer saw a Connecticut Warbler there on May 26. Yellow-breasted Chats were noted at Amherst, Ipswich, and Huntington in May. Two Pipits were seen near Melrose on April 30 and about 15 near Lincoln on May 4.

Soon, now, the earliest south-bound migrants will begin to appear again. Two Turnstones, reported today (June 17), on the outer beach at Orleans, may be the vanguard, or may be merely non-breeding, loitering birds.—JOHN B. MAY, *State House, Boston, Mass.*

NEW YORK REGION.—From mid-April through May, the weather was continuously somewhat cooler than usual. Many transients were most numerous at normal dates (for instance, about May 10), but these waves of abundance were less well marked than is usually the case, involving fewer individuals and species.

Yellow Palm Warblers were unusually numerous in late April; one estimate is of 200 observed in Central Park, New York City, on April 21 (F. E. Watson). There is very likely some correlation between this abundance and the exceptionally early dates of migration recorded for this species in the last report. The Golden-winged Warbler, as a transient, is ordinarily one of the rarest in the New York Region, and several scattered occurrences for it reported this spring may indicate unusual abundance or some shift from normal migration route. It is recorded on May 4, Milltown, N. J., (P. L. Collins), and Allwood (Passaic Section), N. J. (R. T. Clausen, and Montclair Bird Club); May 7, Baldwin, L. I. (H. C. Raven); May 8, Speonk, L. I., (Le R. Wilcox).

Several abnormally early arrivals are recorded, notable among them being a Yellow-bellied Flycatcher, April 26, Bernardsville, N. J. (Miss C. D. Kuser). At Milltown, N. J., 3 male Redstarts appeared on April 25 and Orchard Oriole on April 29 (P. L. Collins). Seven Redstarts were re-

ported on April 28 from Southfields (near Tuxedo), N. Y. (Watson). Both these localities are a little outside the New York Region, strictly speaking, as delimited in Griscom's 'Handbook,' but with comparable migration dates. Other interesting reports are a Prairie Warbler, April 25, Central Park (Watson); Hooded Warbler, April 28, Boonton, N. J. (C. A. Urner); Hooded Warbler and Short-billed Marsh Wren (2), April 28, Bronx Section (Bronx Co. Bird Club); Gray-cheeked Thrush, May 4, Passaic (Clausen).

On the other hand, there are exceptionally late dates for two species of Ducks on Long Island: 2 female Canvasbacks, May 1 (Wilcox); 2 American Widgeon, probably young males, May 11, Mastic (J. T. Nichols). A Bufflehead is reported in the Bronx Section, May 5 (Bronx Co. Bird Club). In late April C. A. Urner writes of Blue-winged Teal in pairs still present at Troy Meadows, N. J., and the species is reported there on May 1 (W. D. Quattlebaum). Other late dates are a Tree Sparrow, May 5, Troy Meadows (Clausen); Fox Sparrow, May 9, southwest of Riverhead, L. I. (Wilcox); Mourning Warbler, June 1, Milltown (Collins).

The most notable rarity observed is an adult Little Gull in May, first seen from the Staten Island ferry (J. P. Chapin), and later at Port Newark, N. J. (W. F. Eaton and others). This accidental visitant will presumably be recorded in detail elsewhere. A Mockingbird is reported at Ward's Island, New York City, April 8 to 16 (J. Cromwell); at Passaic, April 29 into the summer (Clausen). Le Roy Wilcox, at Speonk, L. I., reports a Mockingbird, May 18; Black Tern, May 24; male Summer Tanager, May 25; Blue-gray Gnatcatcher, Speonk, April 21.

Mrs. C. S. Hegeman writes from Montclair, N. J.: "A flight of Broad-winged Hawks was seen on Saturday, April 20, at about 10 o'clock in the morning, just over Verona, N. J. The birds came in two groups, flying north, very high, a few minutes apart, and we counted over 30 in the first and nearly 40 in the second. There were easily 75 Hawks. Three more brought up the end of the flight, but they flew lower and were



identified certainly for Broad-wings." Wilcox sends an interesting description of a marsh at Westhampton, L. I., flooded by a wind tide, and which seemed to be alive with alewives when the water had receded to a depth of about 4 inches on May 4. These fish averaged about 10 inches long, not counting the tail-fin, and there were several Herring Gulls and Night Herons feeding on them, the latter swallowing them whole. "The Heron would jab several times in the water at the fish before it secured it by the head and managed to drag it to a tuft of grass above water. Then the Heron would grab the head, holding it on the ground for at least five minutes or longer, until the fish was about helpless. It took about five minutes after the bird started to swallow the fish before the tail disappeared out of sight. The birds went through the greatest contortions in order to get the fish down."—J. T. NICHOLS, *New York, N. Y.*

PHILADELPHIA REGION.—The promise of a fine, warm spring, which was given by the mild, pleasant April days, was dispelled by the cold, rainy days of May. The average temperature for the month of May was several degrees below normal.

Owing, no doubt, to abnormal weather conditions, the migration was long drawn out, extending well into June. Few, if any, marked waves were noted.

The outstanding feature of the season was the unusual numbers of White-crowned Sparrows. Between May 6 and 15 this bird was quite common. Among the Warblers, the Magnolia and Worm-eating appeared more common than usual. The Bay-breasted and Wilson's were perhaps less common.

Some rather early arrival dates are contributed by Mr. Clattenburg, Narbeth, Pa.: April 29, Indigo Bunting and Grasshopper Sparrow; April 30, Chestnut-sided Warbler, Blackburnian Warbler, Brewster's Warbler (also seen by Livingston) and Hooded Warbler; May 3, Canada Warbler; May 8, Black-poll Warbler.

The following migrants were present unusually late: Rittenhouse Square, Philadelphia, June 3, Redstart; Glenolden, Pa., June 4, Gray-cheeked Thrush (Gillespie);

Cape May, N. J., May 26, Bay-breasted Warbler (Yoder); Cape May, June 9, Blackburnian Warbler; Collingswood, N. J., June 3, Black-throated Green Warbler (Potter).

Many good one-day lists, were obtained by various observers: Southern Delaware, May 12, 101 species (J. T. Emlen, Jr.); within 5 miles of Glenolden, Pa., May 5, 96 species, Blue-winged Teal (Messrs. Debes, Gillespie, and others); Camden, Atlantic, and Cape May counties, N. J., May 12, 113 species, Great-Horned Owl, Wood Duck (Mirick and others); Cape May, N. J., May 26, 90 species (E. Underdown and others); Boonton, Elizabeth, Newark, Manasquan, and Brigantine, N. J., May 17, 154 species (Messrs. Edwards, J. Kuerzi, Urner, and Walsh). Eighteen hours were spent in the field and at least two observers saw or heard all the birds. This remarkable list is as follows: Pied-billed Grebe, 3; Loon, 4; Herring Gull, 40; Ring-billed Gull, 9; Laughing Gull, 52; Bonaparte's Gull, 40; Common Tern, 15; Least Tern, 6; Black Skimmer, 25; Double-crested Cormorant, 6; Red-breasted Merganser, 3; Black Duck, 15; Blue-winged Teal, 6; Wood Duck, 5; Brant, 1; Mute Swan, 5; Bittern, 5; Least Bittern, 3; Great Blue Heron, 2; Green Heron, 3; Black-crowned Night Heron, 15; King Rail, 1; Virginia Rail, 6; Sora Rail, 10; Florida Gallinule, 6; Coot, 6; Woodcock, 3; Dowitcher, 500; Knot, 500; White-rumped Sandpiper, 12; Least Sandpiper, 12; Red-backed Sandpiper, 500; Semi-palmated Sandpiper, 1,000; Western Sandpiper, 1; Sanderling, 2; Yellow-legs, 1; Greater Yellow-legs, 48; Solitary Sandpiper, 4; Spotted Sandpiper, 6; Hudsonian Curlew, 2; Black-bellied Plover, 1,000; Killdeer, 4; Semi-palmated Plover, 100; Piping Plover, 2; Turnstone, 2,000; Bob-white, 2; Pheasant, 2; Mourning Dove, 12; Turkey Vulture, 25; Marsh Hawk, 3; Sharp-shinned Hawk, 1; Red-shouldered Hawk, 1; Bald Eagle, 1; Sparrow Hawk, 3; Osprey, 15; Barred Owl, 1; Screech Owl, 1; Yellow-billed Cuckoo, 1; Black-billed Cuckoo 3; Kingfisher, 3; Hairy Woodpecker, 2; Red-headed Woodpecker, 2; Downy Woodpecker, 1; Flicker, 12; Whip-poor-will, 4; Chimney Swift, 66; Ruby-throated Hum-

mingbird, 2; Kingbird, 12; Crested Flycatcher, 6; Phoebe, 3; Wood Pewee, 3; Yellow-bellied Flycatcher, 3; Alder Flycatcher, 1; Least Flycatcher, 1; Blue Jay, 8; Crow, 21; Fish Crow, 1; Starling, 70; Bobolink, 6; Cowbird, 12; Red-winged Blackbird, 43; Meadowlark, 12; Orchard Oriole, 1; Baltimore Oriole, 3; Rusty Blackbird, 5; Purple Grackle, 24; House Sparrow, 95; Goldfinch, 12; Vesper Sparrow, 1; Savannah Sparrow, 6; Grasshopper Sparrow, 1; Henslow's Sparrow, 1; Sharp-tailed Sparrow, 1; Seaside Sparrow, 1; White-throated Sparrow, 1; Chipping Sparrow, 6; Field Sparrow, 13; Song Sparrow, 52; Swamp Sparrow, 27; Towhee, 14; Cardinal, 2; Rose-breasted Grosbeak, 3; Scarlet Tanager, 20; Purple Martin, 3; Cliff Swallow, 50; Barn Swallow, 22; Tree Swallow, 25; Bank Swallow, 3; Rough-winged Swallow, 3; Cedar Waxwing, 2; Red-eyed Vireo, 57; Warbling Vireo, 2; Yellow-throated Vireo, 10; White-eyed Vireo, 6; Black and White Warbler, 8; Worm-eating Warbler, 4; Blue-winged Warbler, 10; Golden-winged Warbler, 12; Tennessee Warbler, 1; Parula Warbler, 3; Yellow Warbler, 15; Black-throated Blue Warbler, 1; Myrtle Warbler, 60; Magnolia Warbler, 10; Chestnut-sided Warbler,\* 12; Bay-breasted Warbler, 3; Black-poll Warbler, 6; Blackburnian Warbler, 6; Black-throated Green Warbler, 4; Pine Warbler, 1; Ovenbird, 15; Water Thrush, 12; Louisiana Water Thrush, 1; Maryland Yellow-throat, 54; Yellow-breasted Chat, 2; Hooded Warbler, 4; Wilson's Warbler, 2; Canada Warbler, 12; Redstart, 12; Mockingbird, 1; Catbird, 32; Thrasher, 14; House Wren, 14; Short-billed Marsh Wren, 2; Long-billed Marsh Wren, 20; White-breasted Nuthatch, 2; Tufted Titmouse, 8; Chickadee, 5; Wood Thrush, 5; Veery, 12; Gray-cheeked Thrush, 3; Olive-backed Thrush, 2; Robin, 42; Bluebird, 12.

Other records of interest: Easton, Pa., May 19, Bay-breasted Warbler; May 22, Red-breasted Nuthatch and Mourning Warbler. Bangor, Pa., May 26, Short-billed Marsh Wren (W. A. Paff). Delaware City, Del., April 27, Shoveler 2; May 4, Gadwall 2, Blue-winged Teal 6, Pintail 4, Baldpate 4 (Worth). Near Easton, Pa., April 21,

large migration of Broad-winged Hawks, perhaps 100, Duck Hawks 5, Bald Eagle 1 (Livingston and Gillespie). Springfield, Pa., May 7, Red-backed Sandpiper (Debes). Wissahickon, Pa., May 5, Brewster's Warbler (Yoder). Narberth, Pa., May 15, Mourning Warbler, Olive-sided Flycatcher (Livingston and Clattenburg). Manasquan Inlet, May 11, Caspian Tern 3. Beach Haven, N. J., May 11, Migrant Shrike (Urner). Near Norristown, Pa., May 30, Upland Plover 6 (Middleton). Moorestown, N. J., May 30, Mockingbird (R. Haines).—JULIAN K. POTTER, *Collingswood, N. J.*

WASHINGTON (D. C.) REGION.—The early, cool weather in the Washington Region was continued through April and May, 1929, with only a few hot days interspersed. In view of this, the migration of birds was of some interest. As would be expected, several species remained later than usual and a few were late in arriving. A great number, however, were earlier than the average, and some birds arrived at an earlier date than we have ever known them to do in this locality. From the standpoint of the observer, the movement of transient species was rather unsatisfactory, since the bulk, owing probably to the prevailing cool weather, was delayed in arriving and passed through quickly, leaving us few days on which a large number of individuals was present.

Some of the species that remained later than usual were the Hermit Thrush, Rusty Blackbird, and Herring Gull, the last mentioned seen as late as May 11 on the Potomac River. The Ring-billed Gull and the Bonaparte's Gull were common on the Potomac River on May 11, over 100 of the former being seen below Washington. This is very late for so large a number, since only a few usually are to be found after the last of April. A Holboells Grebe, noted by the writer on the Potomac River opposite Alexandria, Va., on May 11, is not only the latest spring occurrence of this species but is an interesting record, owing to the rarity of the bird in this region. March 26, 1916, is its latest previous record.

The birds that were apparently late in arriving included the Fish Hawk, Acadian



Flycatcher, and Wilson's Thrush, all of which were several days behind their usual appearance.

On the other hand, and rather surprisingly, a large proportion of the transient song-birds, as well as a few of the water-birds, appeared earlier than the average date of spring arrival, although in most cases this difference was not more than a week. These include such species as the Solitary Sandpiper, Golden-winged Warbler, Yellow-throated Vireo, Ruby-throated Hummingbird, Olive-backed Thrush, and Black-billed Cuckoo. Furthermore, the Parula Warbler was observed on April 7, at Oaks, Va., by W. H. Ball and M. T. Donoho, a long time in advance of its average appearance of April 23; and the Bank Swallow, simultaneously observed, was almost as much ahead of time, since its average is April 20. Furthermore, five species came earlier than any previous record that we have for them. The Wood Thrush was reported April 4, at Chevy Chase, Md., by Mrs. H. H. T. Jackson, which is nine days ahead of its previously earliest record of April 13, 1888. The White-eyed Vireo, seen on April 5 by W. H. Ball, on Alexander Island, Va., is considerably in advance of April 10, 1912, which is its previously earliest record. The Maryland Yellow-throat was seen by W. H. Ball near Washington on April 11, whereas, its previously earliest record is April 13, 1891. The Least Bittern was noted by the same observer on Alexander Island, Va., on April 12, as compared with its previously earliest record of April 27, 1922. The Yellow-billed Cuckoo was noted by Mrs. L. D. Miner at Dyke, Va., on April 27, as compared with its former earliest record of April 30, 1927.

Among the occurrences of rare or otherwise interesting birds might be mentioned the Pectoral Sandpiper, seen on April 24 by Edmund Platt in the Tidal Basin along the Potomac River, at Washington. The Blue Grosbeak was seen along Piney Branch on May 4 by Mr. and Mrs. W. J. Whiting. A single Laughing Gull was noted by the writer on the Potomac River near Freestone Point, Va., just below Indian Head, Md., on May 11. Two Double-crested Cormorants were

seen also by the writer on the Potomac River near Fort Washington on April 13. A Short-billed Marsh Wren was reported by W. H. Ball as having been observed along the Potomac River about a mile above Plummer's Island, Md., on April 30. This bird is exceedingly rare in the vicinity of Washington, and all records of its occurrence are of interest. The Florida Gallinule was noted on April 12 by W. H. Ball, at Alexander Island, Va. This bird has been breeding more or less regularly in this vicinity during the past few years. The breeding of the Migrant Shrike in the vicinity of Washington was proved by members of the local Audubon Society on May 18, when they saw several young just out of the nest near Spring Hill, Va.

The Pileated Woodpecker, which is one of the rarest birds in the vicinity of Washington, was this year found nesting along the Potomac River a short distance below Great Falls, in Maryland, by Dr. F. C. Craighead. The nest was in a sycamore tree between the canal and the river in woodland, and was observed by a great many persons interested in bird-life.

The water-fowl census on the Potomac River showed the usual seasonal decrease on April 13 to about 9,500 in the region just below Washington, and on May 11 to 91 individuals. In both these months the Lesser Scaup was the most numerous and the Black Duck was next in numbers. On April 13, a large number of Coots (almost 500) was seen. The following species were seen on April 13: Lesser Scaup, Greater Scaup, Black Duck, Bufflehead, Canvasback, Baldpate, American Goldeneye, Ruddy Duck, Gadwall, Mallard, Redhead, and American Merganser. On May 11, the species were: Lesser Scaup, Ruddy Duck, Mallard and Black Duck.—HARRY C. OBERHOLSER, *Biological Survey, Washington, D. C.*

PENSACOLA (FLORIDA) REGION.—A uniformly warm April with no cold spells, followed by normal temperatures in May and June, provided an unusually favorable nesting season. Rainfall for the entire period has been below average.

A few of the migrants that arrive regularly in this period appeared earlier than ever before noted: Acadian Flycatcher and Rose-breasted Grosbeak (rare), April 21; Magnolia Warbler, April 27. Other arrival dates well within extremes are: Dowitcher and Yellow Warbler, first seen on April 17; Hudsonian Curlew (W. P. Proctor) and Scarlet Tanager, April 18; Purple Gallinule (R. C. McClanahan), April 20; Yellow-billed Cuckoo and Water Thrush (var.?), April 21; Redstart, April 27; Yellow-breasted Chat, April 29; Veery, May 4 (C. L. Smith, Jr.); Black Tern (Proctor) and White-rumped Sandpiper, May 8; Black-poll Warbler, May 12; Knot, May 16 (Proctor); and Gray Kingbird, June 8. The Hudsonian Curlew is so rare here as to be considered accidental, while the Knot, White-rumped Sandpiper, and Black-poll Warbler have been noted only once before during my thirteen years' residence here. Purple Gallinules, rare or elusive here, appeared several times in late April and May.

A number of transients stayed later than I have ever before recorded them. They are: Pectoral Sandpiper, April 17; Yellow-throated Vireo, April 27; Hudsonian Curlew, May 12; Black-bellied Plover (adult in breeding plumage), May 19; Least Sandpiper and Water Thrush (var.?), May 22; Barn Swallow, May 30; and Spotted Sandpiper, June 2 (McClanahan). Other departure dates, about normal, include: House Wren (var.?), April 17 (Proctor); Sora (Proctor), Wilson's Snipe, and Ruby-crowned Kinglet, April 18; White-throated Sparrow, April 23; Pied-billed Grebe (McClanahan), April 26; Double-crested Cormorant, April 27 (McClanahan); Greater Yellowlegs (rare), Myrtle Warbler, and American Pipit, April 28; Indigo Bunting, April 29; Scarlet Tanager, May 1; Loon, May 4 (McClanahan); Catbird, May 5; Yellow Warbler, May 6; Cedar Waxwing, May 8; Nelson's Sparrow, May 9 (McClanahan); Lesser Yellowlegs, May 11; Bonaparte's Gull (Proctor), Blue-winged Teal, and Red-backed Sandpiper, May 12; Ring-billed Gull, May 13 (Proctor); Herring Gull, May 16 (Proctor); Solitary Sandpiper, May 18; Semipalmated Sandpiper, May 22; and Knot

and Sanderling, June 1. No departure dates can be given for Red-breasted Merganser or Lesser Scaup, since a few individuals of both species always summer here.

A new species on my local list is the Ring-necked Duck, long suspected to occur but never before noted. A single bird was seen with a flock of Lesser Scaups on April 28. The abnormally protracted sojourn of the Horned Grebe, noted in my report for the preceding period, was even further extended. Three birds in full spring plumage were seen on May 12. The Anhinga, a species long known to occur regularly in northern Florida, was finally located in some numbers in this immediate region on May 26. An adult Red-tailed Hawk, a bird of rare occurrence here, was seen on May 26. It was carrying, with difficulty, a full-grown cottontail rabbit that it had just killed—unusual food for this species. A few Loons, usually wounded birds, summer here occasionally. One was seen on June 1. On the same day, a single Caspian Tern was noted. This species may occur regularly, but the present instance is only the second in my experience.

Nesting activity reaches its peak in this period, and the nests of two species were found at least two weeks earlier than ever before—W. P. Proctor reported a nest and 3 eggs of the Least Tern on May 13, and I found two nests of the Black Skimmer on June 1. Other nesting dates include: Yellow-throated Warbler, incubating, April 21; Florida Screech Owl, incubating, April 22; Towhee (var.?), April 27 (Proctor); Orchard Oriole, last of 5 eggs laid, April 29 (Proctor); Purple Martin, young just hatched, May 2 (Smith); Purple Martin, last of 5 eggs laid, May 4 (McClanahan); Chimney Swift, seen gathering nesting material, May 5; Red-cockaded Woodpecker and Kingbird, incubating, May 9; Black Skimmer, seen in mating flight, May 12; Chuck-will's-widow, eggs on point of hatching, May 15 (Proctor); Rough-winged Swallow, May 18; White-eyed Vireo, incubating, May 26 (McClanahan); Florida Red-shouldered Hawk, large young birds still in nest, May 30; and Least Tern, 16 nests with 2 eggs each, June 1. A newly completed nest of the Orchard Oriole, found on May 11, was totally concealed



within a bunch of Spanish 'moss'—only the second I have ever seen in such a situation. An addition to the local list of breeding birds is the Alabama Seaside Sparrow—a pair of adults with young just on the wing was shown to me by R. C. McClanahan on May 15.

A large colony of Little Blue Herons, estimated to contain 1,500 birds, was visited on May 26 and was found to contain nests in all stages of development from those containing fresh eggs to those from which well-grown young climbed actively at our approach. Five pairs of Anhingas were seen in this colony, but careful search over accessible portions of the swamp failed to discover any nests. On June 4, young Little Blue Herons in the Carpenter's Creek colony were found to be well grown and a number of them were on the wing. Although the Killdeer is not known to nest in this region, it is probable that it does so occasionally—several birds were seen almost daily through May and two were seen at widely separated points on June 12. The Little Sparrow Hawk (*Falco sparverius paulus*), known to nest in southern Alabama, was seen in small numbers about 30 miles east of Pensacola on June 15, where it was almost certainly nesting.

Bird music has diminished in volume and variety since the early part of May until, at the end of the period, only a few species can be heard in song. Catbirds, although common in migration, seldom sing, and an instance of their song on April 27 (Proctor) is one of the few that I have known in this region. Two new voices in my experience were those of the Yellow-throated Vireo and the Magnolia Warbler, both heard on April 27. Red-eyed Vireo, Hooded Warbler, and Wood Thrush were heard in full song in the river swamp in the upper part of the county on May 26 and 30, where they were undoubtedly nesting. All three species are common in migration on the Coast but are not known to nest there.

A welcome addition to the present report comprises extracts from a series of notes from Fairhope (on Mobile Bay), Ala., compiled by Mrs. W. H. Edwards from her own observations and those of her friends. Records not specifically credited to others are Mrs. Edwards'.

Of arrivals, Chuck-will's-widow was first seen on April 16; Nighthawk (var.?), also April 16 (D. McIntosh); Indigo Bunting, April 21 (D. McIntosh); Spotted Sandpiper, May 4; Purple Gallinule, May 5; and Bobolink (not noted this year near Pensacola), May 9 (D. Vanston). The most interesting departure date was that of the Virginia Rail, April 30. Nesting data includes: Red-headed Woodpecker mating, April 18; Cardinal incubating, April 21 (W. James); Mockingbird incubating, April 25; Southern Flicker excavating nest, April 26 (Mrs. J. Connolly); Mockingbird's second nest (3 eggs), April 28 (first brood about a month old); Orchard Oriole incubating, April 28; Loggerhead Shrike incubating, May 8 (very late); Florida Nighthawk, first egg laid, May 11 (very early); Red-headed Woodpecker carrying food to young in nest, May 17; Ward's Heron about to leave nest and Little Blue Heron colony comprising ten nests with fresh eggs, May 25; Green Heron, young well grown and climbing actively, May 26; and Crested Flycatcher, eggs just hatched, June 9 (D. McIntosh).

Mrs. Edwards mentions having found the dried carcass of a Southern Flicker hanging by a piece of twine about its throat. Similar instances are known of species that use string in nest building, but such an accident occurring to a bird that uses no nest-lining material whatever is indeed strange. Mrs. J. Connolly describes a battle between Purple Martins and two pairs of Bluebirds for the possession of a Martin-house in which the Bluebirds had already established themselves. One pair of Bluebirds was evicted, while the other remained to nest in company with the Martins. An amusing, as well as unusual incident, reported by Mrs. Connolly, is the attempt of a Tufted Titmouse to get nest-lining material by pulling long hairs from the back of a sleeping collie. The bird successfully pulled three hairs before the dog awoke and resented the familiarity.—FRANCIS M. WESTON, U. S. Naval Air Station, Pensacola, Fla.

OBERLIN (OHIO) REGION.—This final season of spring migration, with its early periods of excitement and activity, and its

later growing quiescence into the nesting season, has been one of great interest, for a large proportion of the local migration list of species has been recorded, including several uncommon species.

The latter half of April was cool and rainy, with rising temperatures toward the end of the month. Frosts occurred April 22 and 23, and a heavy hail-storm came on the 25th. The first half of May was cool and rainy, with snow-spits on the 3d and frost on the 10th; the last half was warmer—hot after the 26th. On May 20 and 22 came the last frosts of spring. The first half of June has been noticeably cooler and drier than normal.

The vegetation was nearly in summer condition by early May, even the beeches and ashes, normally late, being in full leaf at about that time. Warbler study during the middle of May, when they were at the height of their migration, was difficult because of the dense foliage.

Food conditions have been good, especially for the insectivores. The high waters of the lake have driven shore-birds to the flooded fields in most localities, for beaches have been largely washed away. Nesting conditions have been good for all types except the marsh-birds, where high water and frequent storms have destroyed nests and eggs in considerable quantities.

Thanks to the several diligent observers here at Oberlin, the season has been a very successful one—the most so in several years. Of the 189 species recorded as spring transients in this region during the last thirty-four years, 162 have been seen this year.

Fourteen species were seen this year that were not found in 1928: Hooded Merganser, April 12; Gadwall, March 27; Cliff Swallow, May 2; Florida Gallinule, April 13; Orange-crowned Warbler, May 20; Least Bittern, May 11; King Rail, May 11; Northern Parula Warbler, May 18; Hooded Warbler, May 1; Nelson's Sparrow, May 17; Connecticut Warbler, May 24; Baird's Sandpiper, May 11; Semipalmated Sandpiper, May 11; Black Rail, May 19 (by Wm. Holt at Gypsum).

On the other hand, only two species, Whistling Swan and Dickcissel, were not found this year in this region, though seen

last year, and this year recorded at neighboring localities.

Fourteen species were a week or more earlier than in this season last year: Warbling Vireo (10 days), April 23; Blackburnian Warbler (13 days), May 11; Magnolia Warbler (11 days), April 19; Whippoorwill (9 days), April 24; Lincoln's Sparrow (12 days), May 13; Bay-breasted Warbler (7 days), May 11; Yellow-billed Cuckoo (12 days), May 15; Tennessee Warbler (11 days), May 12; Acadian Flycatcher (16 days), May 11; Least Sandpiper (10 days), May 6; Wilson's Warbler (10 days), May 11; Night-hawk (11 days), May 1; Yellow-bellied Flycatcher (7 days), May 11; Olive-sided Flycatcher (14 days), May 15. Some of the Warblers and Shore-Birds, 12 in all, were about a week late; 3 of these, over two weeks late.

Waves of migration were rather scattered at Oberlin this spring, but a few stand out: Of arrivals, 19 occurred during April 27 to May 4 (all insect-eaters); and 40 occurred during the period, May 10 to 21 (mostly Warblers; a few Sparrows and Shore-Birds). The Loon left April 21, the Golden-eye, April 24; 4 Ducks and the Fox Sparrow left during the period, April 28 to 29; 5 more Ducks and the Hermit Thrush and Sapsucker left during May 6 to 8; 22 species left during the period, May 17 to 21; and 32 species left during May 24 to June 2.

Of the winter residents, the Tree Sparrow and Winter Wren left this region during the latter part of April (14th and 24th); the Brown Creeper, Slate-colored Junco, Golden-crowned Kinglet, Pine Siskin, and Red Crossbill left during early May (1st to 15th); and the Purple Finch and Ring-billed Gull left on May 20 and 28, respectively.

Especially notable species observed here this season: White-crowned Sparrow, unusually common; Nelson's Sparrow (two previous records) seen May 17 (E. Kemsies); Connecticut Warbler, usually rare, but seen several times this season; Cape May and Wilson's Warblers, present in unusually great numbers; Olive-sided Flycatcher, seen much oftener than usual; and Red Crossbill, a small flock of about a dozen visited a row of Scotch pines in town from May 11 to 15.



They acted as though they were prepared to nest. This species has not been seen in Oberlin before for many years.

The observers of Toledo, Wooster, and Mount Gilead, L. W. Campbell, Jim Bruce, and Miss Alta Smith, respectively, have each contributed more than enough interesting and instructive notes on the season to warrant separate reports for BIRD-LORE, and I can do little more than include herein a brief résumé of them.

At Toledo, 160 species were seen this spring as compared with the 153 reported last spring. Five species were reported last year, but not this spring. Fifteen species were reported this spring that were not observed in 1928. The most important of these were: Golden Plover, May 5; Long-billed Dowlitcher, May 12 (first spring record); Prairie Warbler, May 12 (Mrs. Littlefield); Double-crested Cormorant, May 5; Hudsonian Curlew, May 18; Knot, May 26; European Widgeon, April 17. Sixteen species were a week or more earlier this season than in 1928. Nine species were a week or more later this year than in 1928. The outstanding migration waves came April 26 to May 5 (34 species), May 11 to 12 (27 species), May 14 to 18 (14 species).

Jim Bruce reports a total of 144 species for Wooster since January 1. The most important waves of migration there this season have been: April 18 to 22, 11 species—White-throated Sparrow, Greater Yellowlegs, Bank Swallow, Black-throated Green Warbler, etc.; April 27 to May 1, 19 species—Bobolink, Baltimore Oriole, Wood Thrush, etc.; May 4, 9 species—Black Tern, Florida Gallinule, Long-billed Marsh Wren, etc.; May 15, 12 species—Yellow-billed Cuckoo, Acadian Flycatcher, Kentucky Warbler, etc.

The most interesting records for Wooster this season are as follows: Bachman's Sparrow, 2 (seen and heard singing several times), April 27, last seen April 29; King Rail, April 30; Golden-winged Warbler, May 7; Common Tern, May 10; Virginia Rail, May 10; Broad-winged Hawk, May 17. These were all new records for the county. The Kentucky Warbler, seen May 15 (2 breeding pairs), is another record of interest.

Miss Alta Smith, of Mount Gilead, con-

tributes several noteworthy records. Migration waves came April 20 to 23, Chimney Swift, White-throated Sparrow, Warbling Vireo; April 27 to May 2, Ruby-crowned Kinglet, Purple Martin, Red-headed Woodpecker, Tennessee Warbler; May 11, Black and White Warbler, Black-throated Green Warbler, Yellow-throated Vireo, Rose-breasted Grosbeak, Gray-cheeked Thrush; May 21 to 24, 6 species (Warblers, etc.); May 16, 5 species (Warblers, etc.); and May 27 to 28, Hooded Warbler, Canada Warbler, Yellow-bellied Flycatcher, Cedar Waxwing.

Miss Smith writes that the record for the White-throated Sparrow is the first in three years at Mount Gilead, and the same for the Ruby-crowned Kinglet. She reports that the Wood Thrush, an abundant species there last spring, has not been seen at all at Mount Gilead this spring.—HAROLD C. JONES, *Oberlin, Ohio*.

MINNESOTA REGION.—Following the heavy snowstorm of April 10 and 11, the month continued cold and wet, with night temperatures down to freezing and skits of snow occasionally in the northern part of the state. With the exception of two brief spells in the latter part of the month, when the mercury reached 80° at Minneapolis on the 22nd and 89° on the 28th, the entire month of May was unusually cold. During the first week there were heavy frosts as far south as Minneapolis, with ice on one or two occasions. The 15th was the coldest ever recorded here, with 8 inches of snow at Minneapolis and temperature down to 20° at Duluth on the morning of the 16th. Apple, plum, strawberry, and other blossoms were killed, asparagus and other early garden crops extensively damaged, and many wild plants injured. Two frosts following this were heavy enough to injure small fruits. There were several warm days in the first half of June (92° at Minneapolis on the 10th) but it continued generally cool with cold north winds and several severe rain and hailstorms that must have taken considerable toll among nesting birds. On the morning of the 12th there was a heavy white frost in the upper Red River Valley. A destructive cyclone swept through the western central

part of the state on the 9th. During the mid-May storm, Lake Superior experienced terrific icy gales, causing the loss of several large steamers.

This continued cold weather during the last six weeks of spring had the effect of disturbing the regular movements of the birds, checking and concentrating them at times, which resulted in an abnormal abundance for a day or two where they were forced to tarry and seek shelter in the face of severe northerly storms. Mr. Swedenborg states it thus: "Birds have been as numerous as at any time during the past several years but they have not passed through in waves as they do in a normal spring migration. The only distinct wave that I noticed was the one of early Warblers and the other species that travel with them. This was on the last day of April and the first of May. Later, on May 15, a less distinct wave appeared, made up of the late Warblers. This day it rained and snowed most of the time, bringing the birds closer to the ground and probably making them seem more numerous than they really were." This May 15 was a memorable one. All day the temperature fell, with a fierce wintery wind from the northwest and a heavy fall of snow. A very large migration of birds came from the south the night before and landed right in the midst of it. All day they were seeking shelter, and the following night must have been hard on them. Bird students who had the hardihood to go afield made exceptionally large lists, numbering, in several instances, well over a hundred species. Miss Eleanor B. Jilson, of St. Paul, who spent the period from May 11 to 25 at Frontenac, on Lake Pipen, commented on her list of 114 species as follows: "Cool weather prevailed during the two weeks. Very large numbers of Warblers were present during most of the time, particularly on the 15th, 16th, and 17th. There were more Warblers to be seen than at any previous time of my observations at Frontenac, covering a period of fifteen years. These were large flights of Cliff Swallows on the 15th during a very cold rain-storm; also great quantities of Gray-cheeked and Olive-backed Thrushes. This is the second year of seeing the Piping Plover, one specimen in 1926 and three this

year, the 16th and 23d. Five pairs of Cardinals are known to be living there."

On May 2, 3, and 4 a truly mighty host of Tree Swallows paused in the face of icy winds in the vicinity of the "Twin Cities." In many places they covered the ground and bushes with a steel-blue mantle and filled the air like a dense cloud of gnats, attracting the attention and exciting the wonder of many people not especially observant of birds. Miss Hester M. Pollock reported a similar condition down at Frontenac on the same dates.

The shore-bird migration this year was late in arriving, much reduced in numbers, and passed quickly. It was, however, an agreeable surprise to have the Golden Plover reported from several localities in flocks of considerable size—more than for many years. The Sora has been very abundant, something like old days, every marsh seeming to have its full quota. Mr. J. P. Jensen sends the following note from Houston County on May 9: "At some marshes just west of Houston I saw the largest number of Sora Rails that I ever have found in one place. At least a dozen would be in sight close by from any point of view." It has been the same everywhere else.

Swans have passed by in fair numbers, and H. D. Ayers reports of the usual visitation at Lake Mille Lacs: "There were about 150 here this year, from April 8 to 20. They are getting exceedingly tame and spent a good deal of their time within a few rods of the highway where they were an interesting study for many of the tourists."

The following spring calendar for the vicinity of the "Twin Cities" has been compiled from records kindly supplied by Mrs. F. S. Davidson, E. D. Swedenborg, and Charles Evans, of Minneapolis; Alden Risser, of St. Paul; and Messrs. Dawson and Hutt, of the University Farm School, with a few additions from the field-notes of the museum staff and the University Bird Class:

April 13, nest of Migrant Shrike (6 eggs) on 20th, hatched on May 5. 14th, Chipping Sparrow. 16th, Ruddy Duck, White-throated Sparrow (last May 19); 5 Prairie Chickens 'dancing' and booming near southern limit of the city of Minneapolis (Mrs. Davidson);



bloodroot in bloom. 17th, Yellow-headed Blackbird. 18th, Broad-winged Hawk, Rough-winged Swallow. 19th, Bank Swallow, Towhee (more numerous this year than for many years past); White-breasted Nuthatch building. 20th, Savannah Sparrow, Barn Swallow, Brown Thrasher, Pine Warbler (last May 13), Bonaparte's Gull (last May 19). 21st, Sora. 22nd, Rough-legged Hawk. 23d, Florida Gallinule, Louisiana Water Thrush, Clay-colored Sparrow, Yellow-legs (last May 30), Palm Warbler (last May 21). 24th, Chimney Swift. 25th, Black-throated Green Warbler. 26th, House Wren, Yellow Rail (Breckenridge), Orange-crowned Warbler (last May 27); leaves coming out fast. 27th, Black Tern, Spotted Sandpiper, Osprey, Lincoln's Sparrow (last May 19), last Bufflehead. 28th, Lark Sparrow, Solitary Sandpiper (last May 23); nest of Western Meadowlark (6 eggs), Robins feeding young in nest. 30th, Black and White and Nashville Warblers, Least Flycatcher, Blue-headed Vireo (last May 22), Common Tern (last May 22).

May 1, Henslow's Sparrow, Grinnell's Water Thrush (last May 28), Gray-cheeked Thrush (last May 24), Olive-backed Thrush (last June 1), last Fox Sparrow; Phoebe nest (4 eggs). 2nd, Rose-breasted Grosbeak, Maryland Yellow-throat, Wilson's Warbler, Marsh Hawk, nest (3 eggs; 6 eggs May 8). 3d, Many Myrtle and Palm Warblers; immense numbers of Tree Swallows yesterday and today, never saw anything like it before; large numbers of Martins, many killed by autos on boulevards. 4th, Green Heron, Cliff Swallow, Wood and Willow Thrushes, Short-billed Marsh Wren, Yellow-bellied Flycatcher (last May 27), last Tree Sparrows and Winter Wren, Dove's nest (2 eggs), Bob-white's nest (15 eggs); white birch, red-berried elder, Missouri currant and bleeding-heart in bloom. 5th, Long-billed Marsh Wren, Traill's Flycatcher, last White-throated Sparrow; nest of Spotted Sandpiper, Song Sparrow (5 fresh eggs), Killdeer (4 eggs, young out of nest, May 19), Crow (young one-fourth grown), Flicker just finishing nest; many ducks in Minnesota River sloughs including more Gadwalls than for many years past. 6th, Yellow Warbler,

Harris's Sparrow (last May 19), last Golden-crowned Kinglet, nest of Red-winged Blackbird (4 eggs). 8th, Nighthawk, Ovenbird. 9th, Hummingbird, Baltimore Oriole, last Brown Creeper, an unusual number of Bonaparte's Gulls since the 1st. 10th, Kingbird, Bobolink, Carbird, Pectoral Sandpiper (last May 23), Least Sandpiper (last May 23), Semipalmated Sandpiper (last May 30), Greater Yellow-legs (last May 19), Semipalmated Plover (last May 30), flock of Golden Plover (Mrs. Davidson), last Red-breasted Merganser. 11th, Virginia Rail, Golden-winged Warbler, Tennessee Warbler (last May 30), Cape May Warbler (last May 21), Magnolia Warbler (last May 26), Blackburnian Warbler (last May 20), Redstart, last Rusty Blackbirds and Juncos; nests of Eastern Meadowlark (5 eggs), Vesper Sparrow (4 eggs), Brewer's Blackbird (4 eggs), Brown Thrasher on ground (3 eggs), Blue Jay (5 eggs); flowering almond in bloom. 12th, Blue-gray Gnatcatcher (Dawson and Hutt), Warbling Vireo, Chestnut-sided Warbler, Parula (last May 25), Bay-breasted Warbler (last May 25); nests of Broad-winged Hawk (3 eggs), Ring-necked Pheasant (13 eggs); first plum trees in bloom. 13th, Red-eyed Vireo, Crested Flycatcher, Yellow-throated Vireo, Blackpoll Warbler (last May 29), White-rumped Sandpiper; young Grackles able to fly; hoary puccoon in bloom; trees and shrubs now well leaved out. 14th, Least Bittern; nests of Coot (10 eggs), Sora (10 eggs), White-breasted Nuthatch feeding young. 16th, Wilson's Phalarope, Canada Warbler (last May 27), American Pipit (Risser), last Lapland Longspurs and Hermit Thrush; nest of Pileated Woodpecker, eggs hatching (Evans and Bracket). 17th, Black-billed Cuckoo, Orchard Oriole, Indigo Bunting, Gambel's Sparrow, Mourning Warbler (last May 27). "Quite a remarkable migration of Olive-backed Thrushes at Ft. Snelling. They were in clouds, like Blackbirds, from the bushy edges of the bluffs" (Mrs. Davidson). 18th, nest of Hairy Woodpecker (young). 19th, Caspian Tern, Nelson's Sparrow, Pine Siskin, last Ruby-crowned Kinglet, and Horned Grebe, Bank Swallows digging holes. 21st, Olive-sided Flycatcher (last June 1). 22nd,

Wood Pewee, late; nests—12 of Yellow-headed Blackbird with eggs, 3 of Black Tern with eggs, Catbird completed today, 2 eggs of owner and 2 of Cowbird on 28th, 4 of Catbird and no Cowbird's on 30th (Swedenborg); Grackles feeding young on flesh of crayfish picked out through hole made in back; first lilacs, bridal wreath and mountain-ash in bloom. 23rd, last Myrtle Warbler; nest of Chipping Sparrow (4 eggs). 24th, Cerulean Warbler, at least three pairs settled and presumably nesting near Minneapolis (Mrs. Davidson). 25th, nest of Wood Thrush (3 eggs). 26th, Philadelphia Vireo. 27th, nest of Rose-breasted Grosbeak. 28th, Upland Plover near Minneapolis, probably nesting (Dawson). 30th, colony of 12 nests of Eaves Swallows near Minneapolis, building and laying; Dickcissel scarce this year. 31st, last Herring Gull; Connecticut Warbler.

June 1, last Ring-billed Gull. 2nd, nests of Long-eared Owl, 5 young half-grown, Florida Gallinule (5 eggs), Long-billed March Wren, finished but no eggs. 3d, three nests of Warbling Vireo, building. 4th, nest of Least Flycatcher (4 eggs). 6th, a flock of Semipalmated Sandpipers at Silver Lake, eastern McLeod County, 50 miles west of Minneapolis. 9th, nest of Louisiana Water Thrush, eggs hatching (Evans).

Miss Juola, of New York Mills, in Otter Tail County, reports the Whip-poor-will arrived there on April 18 and was heard frequently thereafter. Mrs. Nellie O. Wilson, of Montevideo, says the Mourning Warbler was "common" there during the last week of May, an exceptional occurrence. S. C. Swanson's Sons, of Spring Garden, near Cannon Falls in Goodhue County, send a list of arrivals corresponding closely with those at Minneapolis, but the following nesting dates are of interest: Red-tailed Hawk, May 5; Pileated Woodpecker with young, May 19; Least Flycatcher building, May 26; Redstart, building, June 5; Chickadee, April 18. The following notes are from Miss Barrows and Miss Densmore, at Virginia, on the Iron Range far up in the northern part of the state where conditions are very different from those at Minneapolis; March 27, Wilson's Snipe. April 7, Migrant Shrike. 13th, Martin. 18th, House Wren.

20th, Flicker, Fox Sparrow, White-throated and Vesper Sparrows. 21st, Phoebe and Tree Swallow. 26th, Savannah Sparrow, Sapsucker. May 1, Ruby-crowned Kinglet, Myrtle Warbler. 5th, Hermit Thrush. 8th, Chipping Sparrow. 12th, Brown Thrasher. 24th, leaves just appearing. 25th, marsh marigold and bellwort blooming. 26th, pin cherry and shadbush just coming out. 30th, Phoebe building.

Mr. D. Lange sends a photograph and an account of a nest of the Canada Goose at Swan Lake in Nicollet County. It was on a muskrat-house and contained eggs on April 20. Mr. Lange feels certain it is a pair of wild birds. This is an unusual record these days.—THOS. S. ROBERTS, *Museum of Natural History, University of Minnesota, Minneapolis, Minn.*

CHICAGO REGION.—Cold, clear, pleasant weather, with a few days that were actually crisp and some that were very warm, has marked the months of April and May, slowing up the migration schedule (which at the last report was considerably advanced) and bringing it back to normal.

The consensus of reports received agrees with the writer's views, that is, the Warblers all arrived in one great wave, starting May 11 and continuing through to the 24th. On the cloudy, humid morning of May 11 the writer was looking for migrating Warblers, and at 7 o'clock none were to be seen. At 9 o'clock a violent storm from the southwest broke, and almost immediately the trees, and not only the trees but the ground, were almost covered with the journeying host.

Blackburnians, Cape Mays, Chestnut-sided, Magnolias, etc., were most abundant everywhere, the very pavements being covered with their droppings, so much so that they seemed as though whitewashed. Accompanying them were large numbers of Lincoln's Sparrows, Baltimore Orioles, Ovenbirds, Blue-headed Vireos, and Rose-breasted Grosbeaks. The Golden-winged and one Blue-winged Warbler was noted along with one male Orchard Oriole. It was bird migration in one of its spectacular forms.

Waders have not been numerous, the country being rather dry, no rain having



fallen for one month. The writer saw a large flock of Black-bellied Plover on May 7 west of Wheeling, and noted Yellowlegs at the same place the next day. May 12 the members of the C. O. S. saw Piping Plover, Spotted Sandpiper, and Upland Plover at Beach. Mr. G. P. Lewis reports two Solitary Sandpipers at Riverside on May 19.

The Warblers have appeared in their usual numbers, with three uncommon species. The Connecticut and Mourning Warblers are reported by G. P. Lewis at Argo on May 19. He also saw on this date a Brewster's Warbler which was observed close at hand. Mr. C. C. Sanborn reports the Bay-breasted Warbler from Highland Park on May 18.

Some dates of arrival follow: April 26, House Wren; May 1, Baltimore Oriole; May 6, Bobolink and Catbird; May 7, Black-bellied Plover; May 8, Yellowlegs and Vesper Sparrow; May 11, Magnolia, Black-throated Blue, Black-throated Green, Chestnut-sided, Cape May, and Nashville Warblers, Blue-headed Vireo, Redstart, Ovenbird, Water-thrush, Whippoorwill, Lincoln's Sparrow, Rose-breasted Grosbeak, Baltimore and Orchard Oriole; May 12 (C. O. S. Field day at Beach), among others seen were Caspian Tern, Savannah Sparrow, Henslow's Sparrow, and Rough-winged Swallow; May 15, Nighthawks; May 16, male Redstart and Scarlet Tanager; May 18, Forster's Tern, Short-billed Marsh Wren; May 19, Crested Flycatcher, Pine Siskin still here; Indigo Bunting, Rough-winged Swallow, Warbling Vireo, Northern Parula Warbler, Black-poll Warbler, Wilson's Warbler; June 3, Black-billed Cuckoo, Black-and-white Warbler still here; June 6, mixed flock of Bluebills and Red-headed Mergansers on Lake Michigan; June 11, King Rail with downy young.

This spring C. C. Sanborn and F. Lett have spent considerable time nesting and have found the following nests: May 21, Homewood, Ill., King Rail (10 eggs), Sora (3 eggs), Pied-billed Grebe (7 eggs), Red-winged Blackbird (4 eggs); May 24, Least Bittern (1 egg), Mourning Dove (2 young); May 25, Pheasant (1 egg), Black Tern (3 eggs), Long-billed Marsh Wren (3 eggs),

Florida Gallinule (4 eggs); May 26, Blue-winged Teal (1 egg), Mallard (11 eggs); May 29, Yellow-headed Blackbird (4 eggs); June 6, Deerfield, Ill., Swamp Sparrow (5 eggs), Blue Jay (5 eggs), Brown Thrasher (4 eggs).

Mr. W. I. Lyon, of Waukegan, gives us some figures on banding White-crowned Sparrows. In 1927 he banded only 31 in the whole year and on May 11, 1929, he banded 68 on that one day alone.

A Clay-colored Sparrow, an uncommon summer resident in this region, was taken May 15 at Homewood, Ill., by Frank Lett.

Other unusual visitors to this region were a Harris's Sparrow, and a small flock of Red Crossbills seen May 12 at Beach, Ill., by Mr. Gault, and a Mockingbird reported in Jackson Park on May 13 by Miss Belle Wilson.—FRANK GRASSETT, *Glencoe, Ill.*

DENVER REGION.—It is a cause for real rejoicing to feel, and know, that the birds of this region are again here in their pristine numbers. Reports from all of my friends indicate that this is also true in their areas.

Bulk arrivals were delayed but, once started, came with a rush. These late arrivals seem to have been correlated with the noticeably late lingering of species which go north or into the neighboring mountains. For example, Gambel's Sparrows have remained in Denver many days longer than is their wont; Mrs. Ortman saw 2 in her yard at the southern edge of Denver on June 1, yet my latest record for this species in Denver for thirty-five years is that of May 29, and this but once. On May 29, a White-crowned Sparrow was detected in my yard, which puts it, for this year, in with the Gambel's Class. Evening Grosbeaks remained about my home until May 28, nearly a week longer than any previous visit. Mrs. Ivah Elliott, of Colorado Springs, writes that she saw a Rose-breasted Grosbeak at her home on May 11, a most notable occurrence, as this Grosbeak is one of the rarest of Colorado birds.

Mockingbirds have been reported from many and widely separated areas, the earliest being a bird seen at Fort Morgan by Mr. Hellstern, on May 5. I did not see this

species about Denver until June 1, though it was here probably much earlier than this date. A species remaining long on the plains after its usual date of departure for the north is the Cassin's Purple Finch; it ordinarily departs on its northward journey late in March or early in April, yet this year it was seen about Denver by both Mrs. Ortman and myself as late as May 12.

This spring, the second week of May exhibited a great influx of migrants. A few Warblers were noted earlier, but this was spring's banner migration week. Mr. Hellstern saw the Yellow-throat at Fort Morgan on April 27, while it first appeared in Denver on May 1.

The Redstart was recorded from Denver by Mrs. Ortman as of May 23, by Mr. Hellstern at Fort Morgan on May 19, and Mrs. Weldon at Loveland on May 21; these are the only records for this species for this spring which have been sent to me. As usual, Audubon's Warbler was a fairly early arrival; it appeared first at Colorado Springs on May 26 (Miss Keen), at Denver May 5, and at Fort Morgan, May 9. Its cousin, the Myrtle Warbler, reached the Denver area May 5, and that of Colorado Springs on May 10. Yellow Warblers have been exceedingly common all over, especially at Littleton (Mrs. Kerruish); the species came to my home on May 8 and to Colorado Springs on May 14. I think this Warbler reached Denver from the onset in numbers all on about the same date, because Mrs. Ortman saw it first about the same time I saw it several miles north of her home. Hence this season's arrival of the Yellow Warbler seems to confirm an opinion I have long entertained, that it comes to this area in a bunch.

Swallows have been gratifyingly common in every locality heard from, the beautiful Violet-green coming to Colorado Springs on May 15, seen at Loveland (by Mrs. Weldon) on May 11, and at Denver on May 5. It is always a keen pleasure to note the return of this lively Swallow, though, in truth, it reminds one of the Tree Swallow, which I regret, I have not detected in Denver or its environs for more than fifteen years. No one seems to have seen a Poorwill on the plains, for it has not been mentioned by any

of my co-workers. It passed through Denver on May 11 and 22.

Its congener, the Nighthawk, is again with us in force, reaching Colorado Springs on June 6 (Miss Keen) and Denver on May 31.

Vireos are very common this spring, particularly the Warbling; the Red-eye was noted at Littleton by Mrs. Kerruish on June 1, while I believe I heard it here in Denver about the same time.

Unless I am very much mistaken, there are more of the dark-phased Robins (eastern form) here this season than ever before. It is gratifying, also, to record more Bullock's Orioles as being in Denver than for several years past, yet it is queer that there seem to be few Chipping Sparrows and a veritable swarm of Mourning Doves. Black-headed Grosbeaks are now heard throughout this region, especially in Denver's parks, and the Lazuli Bunting is common along all the creeks leading to the mountains. These parks seem to have held here, far beyond the ordinary departure time, the Evening Grosbeak which was last seen in Cheesman Park on May 28, though its latest recorded date in years past is that of April 24.

The Rock Wren reached Denver on April 16, and seemed to have filtered through its area for many days thereafter, for it was seen in it on April 22 and thereafter up to May 16. It sang more during its transit of this region than usual, the song approaching at times its splendid nuptial song, which is seldom heard on the plains where it is a rare breeder. On April 21, a Thrush was glimpsed in Cheesman Park, a bird I took to be an Audubon's Thrush, but was not at all sure of it. To overcome this uncertainty, it can be said now that the Olive-backed Thrush came to Denver on May 9, the Audubon's on May 15, and the Willow on May 19. The last Thrush (Olive-backed) noted in Denver was seen on May 22. This last Thrush appeared two days earlier at Fort Morgan than at Denver, according to Mr. Hellstern's notes. On May 13 Mr. Hellstern was lucky enough to find a Blackpoll Warbler in his neighborhood. On May 22 Miss Keen saw a Pileolated Warbler in her area. These Warbler records lead up to a brief résumé of the various Warblers seen in the state this



spring. In all, the following have been noted at one or another of the various places whence my friends send reports: Myrtle, Audubon's, Yellow, Macgillivray's, Black-throated Grey, Townsend's, Yellow-throat, Redstart, Pileolated, Long-tail Chat, and the Blackpoll. These species occurred in this region some time between the third week of April and the fourth week of May, the most notable ones being the Townsend's, Black-throated Grey, and the Blackpoll. This is not an extraordinary series of Warblers, but does cover very well the list of our fourteen most common ones, the absentees being the Virginias, Tennessee, Lutescent, and Orange-crowned.

Mrs. Ivah Elliott saw Cassin's Vireo at Colorado Springs about May 25, and the first spring record of the Grasshopper Sparrow was made by Mrs. Weldon at Loveland on May 1, the next records being made at Parker by myself on May 12 and June 2. The cheerful song of Bullock's Oriole is far more common now than for several years past; the species seems to be frequent in all the areas reported upon by my friends. It appeared in Denver on May 11, at Parker the next day, at Colorado Springs (Miss Keen) on May 12, at Fort Morgan (Mr. Hellstern) on May 8, and at Loveland (Mrs. Weldon) on May 7. It would be interesting to know if the earlier arrivals north and east of Denver mean that the birds reach these places by way of the Mississippi River and its branches.

Notes from Fruita kindly sent to me by Mrs. Anna Benson lead me to think that this spring's bird-life there has been different from that of several years past. It strikes me that there has been at Fruita considerable irregularity in the incidence and distribution of birds. Black-headed Grosbeaks, Mourning Doves, and Yellow Warblers have been very common, while Robins, Barn Swallows, Say's Phœbes, Lark and Chipping Sparrows, and Kingbirds have not been "so numerous this year."

On comparison with some of the notes given above, it will be seen that Mrs. Benson's region has had quite a different bird arrangement than obtained on the eastern slope. It is quite a privilege for anyone to enjoy

in Colorado the company of three different species of Hummingbirds, and this is given to Mrs. Benson, for she has noted the Broad-tailed, the Black-chinned, and the Rufous Hummers since the spring migration started. The following list of species and their arrival dates will give a base for comparison between Fruita and the territory east of the Rockies. The Black-headed Grosbeak, Bullock's Oriole, Pileolated Warbler, and the Long-tail Chat reached Fruita on May 6. The Violet-green Swallow came first to Mrs. Benson's home area in hundreds on May 8, accompanied by a few Tree, Rough-winged, and Bank Swallows; on the same day there were noted also the Catbird, Audubon's Warbler, Townsend's Warbler, and the Lutescent Warbler. The Western Tanager arrived on May 12, but the Wood Peewee got there only on May 30. No Nighthawks had appeared as late as June 11. The Gambel's Sparrow left Fruita on May 16 and the White-crowned on May 25.

The Sparrow tribe is, in my opinion, the most faithful group in returning to us each spring. It is a great satisfaction to feel that one then can go out and be pretty certain to see a few of them. In the various reports sent to me this spring are to be found listed the following Fringilline birds: Spurred and Green-tailed Towhees, Vesper, Song, Crown, Clay-colored, Brewer's and Lincoln's Sparrows, the Lazuli and Lark Buntings, and the Pale and Arkansas Goldfinches. This recital by no means exhausts our list of these birds, but it illustrates what I mean.

Colorado has approximately 175 breeding birds. Many are of great interest in that they present slight or marked differences from their eastern cousins. A little sound field study with them will pay large ornithological dividends.—W. H. BERGTOLD, *Denver, Colo.*

PORTLAND (OREGON) REGION.—During the season from April 15 to June 15, the spring part of the bird migration has been completed. On April 17 the writer saw the first Lutescent Warblers and Chipping Sparrows at his own place east of Portland. On April 18 he left on a trip to southern Oregon and did not return to Portland until

April 25. During this trip, in the vicinity of Grant's Pass and Medford, there were swarms of migrating Audubon's, Yellow, Black-throated Gray, and Lutescent Warblers noted. Rufous Hummingbirds were common and Swallows of all species found in Oregon were abundant. Nothing unusual in the way of bird-life was noted.

W. A. Eliot, President of the Oregon Audubon Society, has furnished the most interesting bird-notes of this period. On April 28 he saw great numbers of Audubon's Warblers and a few Alaska Myrtle Warblers. He also saw and heard Lutescent and Black-throated Gray Warblers and Pacific Yellowthroats in full song. On the same day he reports a Townsend's Solitaire in Macleay Park at Portland, a rather unusual record for this late in the season, and Black-headed Grosbeaks. There were Golden-crowned, White-crowned, Rusty Song, Vesper, Savannah and Chipping Sparrows present in numbers, all in full song. On this trip Violet-green and Cliff Swallows were abundant everywhere.

For the week prior to April 28, Mr. Eliot reports great flocks of Evening Grosbeaks, Pine Siskins, and Goldfinches about his home in Portland, and he also saw a Varied Thrush with a mouthful of nesting material, fly across the street. Nothing has been seen of the bird since, and it is doubtful whether it nested in the vicinity. His first record for the Yellow Warblers was May 5, and on the same day he reports Cassin's and Warbling Vireos in goodly numbers.

On May 12 the Portland Audubon Society undertook a May bird census somewhat similar to the BIRD-LORE Christmas Census. This included an area within a 20-mile radius of Portland, and the trip was made between 8 A.M. and 4 P.M. The following observers participated in the census:

Miss Ailie Seaman, Norma Seaman, W. A. Eliot, Harold S. Gilbert, John Halliman, A. B. Thaxter, Gordon Beebe, Hamblin Crowell, Mr. and Mrs. R. G. Brand, Mr. and Mrs. Leo F. Simon, H. T. Bohlman, and Clyde L. Keller.

As a matter of interest and for the purpose of comparison with the Christmas Census, the entire list is furnished. The date is about

the height of the migration here and probably represents close to a maximum list obtainable under ordinary conditions:

Pied-billed Grebe, rare; Mallard Duck, rare; Great Blue Heron, uncommon; Killdeer, common; Bob-White, uncommon; Mountain Quail, rare; California Quail, rare; Sooty Grouse, rare; Cliff Swallow, common; Ring-necked Pheasant, uncommon; Band-tailed Pigeon, uncommon; Western Mourning Dove, rare; Turkey Vulture, uncommon; Sharp-shinned Hawk; Cooper's Hawk, rare; Western Red-tailed Hawk, rare; Black Merlin, rare; Desert Sparrow Hawk, uncommon; Kennicott's Screech Owl, rare; Western Belted Kingfisher, rare; Harris' Woodpecker; Gairdner's Woodpecker; Lewis' Woodpecker, rare; Red-shafted Flicker, common; Rufous Hummingbird, uncommon; Olive-sided Flycatcher, uncommon; Western Wood Pewee, rare; Western Flycatcher, rare; Traill's Flycatcher, uncommon; Streaked Horned Lark, rare; Stellar's Jay, uncommon; California Jay, rare; Western Crow, uncommon; Red-winged Blackbird, uncommon; Western Meadowlark, common; Bullock's Oriole, rare; Brewer's Blackbird, common; Western Evening Grosbeak, common; California Purple Finch, common; American Crossbill, rare; Willow Goldfinch, abundant; Western Savannah Sparrow, uncommon; Pine Siskin, common; Golden-crowned Sparrow, uncommon; White-crowned Sparrow; Western Chipping Sparrow, uncommon; Oregon Junco, uncommon; Rusty Song Sparrow, abundant; Oregon Towhee, common; Black-headed Grosbeak, common; Lazuli Bunting, uncommon; Western Tanager, uncommon; Barn Swallow, rare; Tree Swallow, rare; Northern Green Swallow, abundant; Bank Swallow, rare; Western Warbling Vireo, common; Cassin's Vireo, common; Lutescent Warbler, uncommon; California Yellow Warbler, common; Audubon's Warbler, common; Pacific Yellowthroat Warbler; Black-throated Gray Warbler, uncommon; Townsend's Warbler, rare; Hermit Warbler, rare; McGillivray's Warbler, uncommon; Long-tailed Chat, uncommon; Pileolated Warbler, uncommon; Seattle Wren, common; Western House Wren, rare; Western Winter Wren, rare;

Slender-billed Nuthatch, rare; Red-breasted Nuthatch, uncommon; Oregon Chickadee, uncommon; Chestnut-backed Chickadee, uncommon; Golden-crowned Kinglet, common; Ruby-crowned Kinglet, rare; Russet-backed Thrush, rare; Western Robin, common; Varied Thrush, rare; Western Bluebird.—  
IRA N. GABRIELSON, *Portland, Ore.*

SAN FRANCISCO REGION.—Very little rain fell after the third week in April, but weather remained cool until early May. Then the usual summer fogs began about May 13. By June 3 all rules for California summers had been broken, for it has rained seven out of the fifteen days of June covered by this report. The season is a late one.

Several winter birds lingered after the middle of April, the Hermit Thrush until April 19, the Fox Sparrow and Golden-crowned Sparrow until April 30, the Ruby-crowned Kinglet and Townsend's Warbler until April 17, Pipits until April 18 and Pine Siskins (in a large flock) until May 2. Cedar Waxwings were frequently seen between April 29 and May 24; a western Gnatcatcher was seen near Grizzly Peak (Wythe) on May 5, and the White-throated Sparrow, erroneously reported last time as last seen on March 15, was heard singing its full song on April 26 (Grinnell) and again on May 2 (Lockerbie). Mr. Cain reports a full-plumaged Audubon's Warbler singing at Laurel Dell in Marin County on May 5.

Most of the summer visitants arrived late as the following comparative dates indicate. The dates for 1928 are in parentheses. Black-headed Grosbeak, April 20 (April 6); Yellow Warbler at San José (Allen), April 24, at Berkeley (Grinnell), April 28 (April 18); House Wren, April 20 (March 24); Olive-sided Flycatcher, April 25 (April 21); Lazuli Bunting, May 2 (April 17). Lark Sparrows have been reported twice from the Berkeley Hills, on April 18 (Allen), and near Bald Peak, May 5 (Wythe). Orioles were common in the San Ramon Valley on May 2 and were busily building on May 7. The Long-tailed Chat was found at Alamo on June 4. Lawrence's Goldfinches were found by Miss Wythe in Strawberry Canyon on May 5, and other records show breeding birds near Alamo

and Livermore. The Russet-backed Thrush was first heard in Berkeley on April 28 and was singing freely by May 8. The Western Wood Pewee was seen at Alamo on May 2. Lutescent Warblers which arrived about March 3 took off broods of young by May 13.

Of the resident birds, Linnets were still flocking on April 18, Brown Towhees hatched young on April 30 (Benson), Bushtits had families on the wing by May 7 (Allen). Young Western Robins left the nest on May 31 and California Woodpeckers at Mount Diablo were feeding young in the nest on June 4. On May 5 Miss Wythe found Horned Larks abundant on Bald Peak in the Berkeley hills.

Migrant Tanagers were seen commonly in the East Bay region from May 20 to 31. Several Cassin's Vireos were present in the gardens at the Claremont Hotel on May 1, and Miss Wythe found one on the University campus on June 5 and again on June 13. A Hermit Warbler and a Rufous Hummingbird were seen at Mt. Diablo Country Club on May 2 (Mrs. Saunders). Late migrating Pileolated Warblers from May 9 to 12 and Yellow Warblers on May 20 probably belonged to the races which breed in Alaska.

Golden Eagles, Purple Martins, Phainopepla, White-throated Swifts, Nighthawk, Rock and Canyon Wrens are among the more unusual birds reported by the Audubon Association in their May record.

The spring migration of water-birds as observed from the Key Route mole and ferry is summarized by Mr. Swarth as follows: Glaucous-winged Gulls diminished from April 24 to May 7 when the last were seen. California Gulls, which are always the most abundant species, were reduced to their lowest ebb during May when they were in various stages of mixed plumage and very ragged. The Western Gulls, on the other hand, were almost all adult birds in perfect plumage. Bonaparte's Gulls were abundant till April 28 and were last seen on May 15.

Forster's Terns were last seen by Mr. Swarth on May 10, but on the Sunday following (May 12), the writer found them flying northward across the course of the Golden Gate ferry in unusual numbers. Scoters, both White-winged and Surf, fell



off in numbers by the third week in April but were seen intermittently until May 21. Bluebills were practically gone by May 1, though three individuals were seen occasionally until June 5 when Mr. Swarth joined the northward movement himself. Canvasbacks were last seen on April 19. The writer saw a few Pintails, Ruddies, and Mallards near Vallejo on April 18.

Waders on the Oakland shore have been relatively few this spring. Sandpipers disappeared about May 16. No Phalaropes

were seen during the spring migration, though they were abundant a year ago. Curlew numbered from 1 to 20 until May 12 and Godwits from 1 to 10 until May 13. Small flocks of Dowitchers were seen during the last week in April and the first week in May. One Semipalmated Plover was recognized on May 4. Birds are at their lowest ebb during the first week in June when there are very few Gulls, no Ducks, no waders and only an occasional Cormorant.—AMELIA S. ALLEN, *Berkeley, Calif.*



KILLDEER ON NEST

Photographed by Lorene S. Squire, Harper, Kans

# Book News and Reviews

LIFE HISTORIES OF NORTH AMERICAN SHORE-BIRDS. ORDER LIMICOLÆ (Part 2). By ARTHUR CLEVELAND BENT. U. S. Nat. Mus. Bull. 146, 1929. 8vo. ix+412 pages; 66 plates.

No group of birds is more widely known than the shore-birds. Famous as travelers, conspicuous by voice, actions, and through their choice of haunts, varying greatly in appearance and behavior, numerous in species and individuals, appealing both to sportsmen and naturalists, it is not surprising that an exceptionally large fund of information has accumulated concerning these birds. This fact is reflected in Mr. Bent's monograph. None of the first seven volumes in this notable series equals the two\* on the shore-birds in the wealth of data they contain. Mr. Bent, as heretofore, has not only drawn on his own wide experience and the recorded observations of others, but he has enlisted the coöperation of ornithologists especially qualified to present entire the biographies of some species or to contribute to certain phases of the life of others. Thus, Mr. F. C. R. Jourdain, the well-known English ornithologist, writes on certain Old World species which rarely visit this country, and our own Mr. J. T. Nichols describes the notes of a number of species, a subject on which he speaks with authority.

Records of the Killdeer from the coast of Peru (and possibly other places in South America) doubtless relate to the resident, breeding form, *Oxyechus vociferus peruvianus*, to which no reference is made. The occurrence in numbers of such northern species as the Black-bellied Plover and Hudsonian Curlew in Ecuador in mid-July also seems worthy of mention.† There is the usual excellent bibliography and a fine lot of photographs of nests, eggs, and birds.

Ten years have passed since the first part of this great work appeared. During this time eight volumes have been published. May its author make even better progress in the next decade.—F. M. C.

THE HAWKS OF NEW JERSEY AND THEIR RELATION TO AGRICULTURE. By DR. LEON AUGUSTUS HAUSMAN. Bull. 439, New Jersey Agric. Ex. Station, New Brunswick, N. J., 1928. 8vo. 48 pages; illus.

Any reasonably intelligent person should be able to identify the Hawks of New Jersey with this pamphlet, and any fair-minded one would admit their economic value, as a whole, after reading it. Dr. Hausman presents the case both for and against the Hawks, justly, clearly, and logically. His text is supplemented by drawings, diagrams, keys, and tables that graphically portray the information he seeks to convey. There is no special pleading; his arguments are based on sound economic facts, and the case for the Hawks might be submitted to the jury on this document alone—provided a jury could be found which was not so prejudiced that it was not qualified to render a verdict. But, outside the ranks of ornithologists, we do not know where to look for a jury of this kind.—F. M. C.

THE NESTING HABITS OF WAGLER'S OROPENDOLA (*Zarhynchus wagleri*) ON BARRO COLORADO ISLAND. Bull. Amer. Mus. Nat. Hist. lviii, 1928; pp. 123-166; illus.

This delightful and detailed study of these great<sup>est</sup> Oriole-like birds is not only of the greatest interest to students of bird-life of the tropics, but there is in this paper an important lesson for all students of birds. Dr. Chapman has chosen a single species for his study. In spite of the greatest handicaps he has by his skill and patience, unfolded to us the intimate secrets of these birds living a natural life in their homes swung high from the uppermost branches of a giant sand-box tree. The observations were made with the aid of a 24-power binocular mounted on a tripod at a distance of 100 yards from the nesting tree. These glasses were so powerful that in spite of the distance he could see every detail of the birds' movements, even to the motion of the tongue when calling.

\*Part I of the Shore-Birds. U. S. Nat. Mus. Bull. 142. Dec. 31, 1927.

†Bull. Amer. Mus. Nat. Hist., LV, 1926, pp. 192, 194.

This method of study had the advantage of enabling him to observe the nesting colony as a unit as well as the behavior of the individual bird under normal undisturbed conditions.

In this comprehensive paper Dr. Chapman has made a most valuable contribution to our knowledge of this very common but not well-known bird of the American tropics. He discusses the relationships, seasonal movements, broods, voice, the question of territory, courtship and sexual relations, nest building, the eggs, young, enemies, parasitic birds and offers a final chapter on associated species. Such a complete account of the life history of the Oropendola obtained under extremely adverse conditions is a model as well as a challenge for all students of bird-life.

Faunal lists are useful and have their place but how much more pleasure and what infinitely greater possibilities there are to make original contributions to our knowledge of birds by an intensive prolonged study of a single species.—A. O. G.

#### The Ornithological Magazines

THE AUK.—The April number opens with a memorial notice by A. K. Fisher, of Harry Balch Bailey, who was closely identified with the activities of the Nuttall Ornithological Club prior to the founding of the American Ornithologists' Union, and with the early history of the Union. There follow notes on the growth and behavior of young Golden Eagles, by E. L. Sumner, Jr. Four plates of excellent photographs illustrate the development of young Eagles in a California nest, located in a 90-foot sycamore tree. Eggs laid in mid-February hatched in March, and young left the nest in late May between the age of nine and ten weeks. Then we have some observations on nesting Yellow-crowned Night Herons by Mrs. Nice. The male "has a special display when courting and during the early days of incubation, *viz.*, a very low bow with all plumes extended and a loud whoop uttered with his bill pointed straight up."

Deane quotes some interesting letters of Bachman to Audubon; and Sutton gives

timely suggestions as to how the bird-lover may best help save the Hawks and Owls, clarifying their value to him, and the not unnatural ignorance and prejudice in which they are held by the public at large. Florence K. Daley records the unusual behavior of young Barn Swallows returning to roost in the nest nightly for a considerable period after they were on the wing. O. L. Austin, Jr., presents Labrador records of the European Coot, Common Snipe, and Jack Snipe, individuals which seem to have crossed the Atlantic more or less coincidentally with the remarkable flight of Lapwings in December, 1927. He is surprised that an Eskimo, doubtless familiar enough with our Wilson's Snipe, recognized the Common European Snipe, now considered a race of the same species, as a strange bird. Various Snipes in different parts of the world have so similar a plumage, that it seems not unlikely to the reviewer that the student of bird-skins may readily have overlooked differences between these two, patent to a keen field observer, even with only casual knowledge of birds. C. H. Townsend has studied the Flightless Cormorant of the Galapagos, in captivity at the New York Aquarium, and presents an excellent photograph of it taken there. "When the bird swims or chases minnows under water the wings are closed against the body"; it "did not hesitate to jump from the height of an ordinary table and made a good landing on the floor."

In a technical paper Todd differentiates two species of the South American genus *Phaeoprogne* of Swallows; Van Tyne has studied the avifauna of the little-known Chisos Mountains in Texas. The Blue-throated Hummingbird is of regular occurrence in the dark forested canyons; Couch's Jay, very common everywhere in the forest, feeds mainly on large insects together with a few nuts and seeds, but probably also raids the nests of small birds. The Painted Redstart was locally fairly numerous, and the Colima Warbler of Mexico is an addition to the A. O. U. Check-List. The Rocky Mountain Nuthatch has a thin, weak voice different from that of the eastern White-breasted Nuthatch. Jewett gives annotations on the 34 species of shore-birds known



from Oregon. When slowly rising water endangers the nest and eggs of the Avocet, they often build a platform of grass stems under the eggs, sometimes raising them as much as 8 inches above the ground. Butler lists rare birds in Cincinnati collections.

Among a great variety of General Notes, the Wedge-tailed Shearwater is recorded from off the coast of British Columbia (Jewett); the Sora Rail breeding in Mississippi (Lincoln); the Rufus Hummingbird in South Carolina (Sprunt); Gambel's Sparrow in Illinois and Michigan (Zimmer and Gregory). A new generic name, *Haplochelidon*, is proposed for a South American Swallow (Todd). The Razor-billed Auk has "a distinct soft, semi-downy plumage resembling that of the summer adult between the nesting down and the plumage of the first winter," a condition which seems also to pertain in some other Alcidae, but not in the Common Murre which goes from down into a white-throated plumage like that of winter (Taverner). The Little Brown Crane has been observed crossing Bering Strait from Siberia in southward migration, following back along the probable course of its distribution (Jaques); and a flight of Ross's Gulls at Point Barrow, Alaska, is described (Bent). A Woodcock "wintering" in Massachusetts is recorded (Mackay), but the date, December 9, might, in this species, be for a straggler in southward migration. A Blue Jay was found to be in good condition of flesh despite a bill deformity which must have interfered with normal feeding (C. E. Johnson). The Snow Bunting is reported feeding on snow fleas, and alighting in the top branches of a tree (Watterson).

Death has taken a heavy toll (here recorded) from leaders in the American Ornithologists' Union in the early months of 1929: Dr. Jonathan Dwight and Director Frederic A. Lucas of the American Museum of Natural History, Edward Howe Forbush of Massachusetts, and Robert Ridgway, the foremost American systematic ornithologist.

These are also names widely known and beloved of BIRD-LORE readers.

Continuing his series of admirable articles on 'Alberta Waders in the British List,' Prof. William Rowan writes in *British Birds* (H. F. and G. Witherby, London) for June on the Yellowshank and Greater Yellowshank, or, as we term them, Yellowlegs and Greater Yellowlegs. The paper is illustrated with photographs and drawings, and forms an important and readable contribution to the biographies of the species treated.

*The Florida Naturalist*, quarterly organ of the Florida Audubon Society, published at Daytona Beach, Fla., grows in value with each issue. The June, 1929, number contains, among other articles, the fourth part of C. J. Maynard's 'Adventures of a Naturalist in Florida,' D. J. Nicholson's 'The Glossy Ibis as a Rare Florida Breeding Bird,' and C. J. Pennock's 'Vagaries Regarding Bird-Life in Florida in 1889 and 1929.' It is difficult to believe that both the Florida of today and the Florida of Mr. Maynard can have existed in the life-time of one man.

*The Murrelet*, official Bulletin of the Pacific Northwest Bird and Mammal Society (State Museum, Seattle, Wash.) continues to appear at four-month intervals. The issue for May, 1929, contains the second part of 'Afield and Afloat with Dawson,' by J. M. Edson, who pays a tribute to the late W. Leon Dawson as a field associate, 'Miscellaneous Observations' and 'Menace of Lighted Towers to Birds' by Webster H. Ransom, General Notes and Reports of Club Meetings.

*The Snowy Egret* is the somewhat inappropriate name of a mimeographed publication devoted chiefly to birds in Michigan. Neither the name of the publisher nor place of publication is mentioned, but we learn from a letter that the issue of June 15, 1929, is Number One, that it is edited and published by H. A. Olsen and brother at 172 Manchester St., Battle Creek, Mich., who will send it free to bird students for the remainder of the year.—J. T. N.

# Bird-Lore

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## Bird-Lore's Motto:

*A Bird in the Bush Is Worth Two in the Hand*

THE April-May, 1929, issue of 'American Game,' the Bulletin of the American Game Protective Association, contains an admirable editorial entitled 'Finding the Facts.' "The greatest need of game conservation at present," its writer states, "is more knowledge of life histories, biology, environmental influences, diseases, and other factors affecting all species." As illustrations of the kind of research the author had in mind, he refers to the study of the Bob White, which for the past four years has been conducted in southwestern Georgia and the adjoining parts of Florida by the Biological Survey, to the "Grouse Investigation" which has been made under the auspices of various scientific and conservation bodies, and to the prolonged study of the economic status of predatory birds that has been prosecuted by the Biological Survey. The importance of using the facts disclosed by these and other researches is emphasized. "Too long," the author writes, "has game protection and development been dealt with by the cut-and-dry method or rule of thumb." To all of which we say "Amen!" but alas! though separated only by the thickness of a sheet of paper, how far apart are theory and practice!

On the preceding page of this publication we find an article on a Game Conservation Institute which has been established on a 1,400-acre tract near Clinton, Hunterdon County, N. J. It is the object of this school to produce trained game-keepers, men who know not only how to rear game-birds under

artificial conditions but how to conserve and increase the supply in nature. This school was opened on May 1 last, with a class of twenty-five students from twelve different states. Here, if anywhere, we have a group of men who would profit by 'finding the facts,' and if one may judge by the photograph presented of the class, its members are capable not alone of profiting by the facts found by others but of finding facts for themselves. Apparently, here is a new field for young naturalists in which they may learn, under experienced teachers, the practical side of game-propagation and may also do original work in the field as they try to 'find the facts' concerning the relation of species to their environment. But imagine how our enthusiasm is checked as we read: "Under the direction of Mr. Craven, each student is taught the best methods of killing every kind of vermin to be found at the school property and a careful record is kept of every head of vermin killed." This record, here published, shows that "296 Hawks and 179 Owls" have been destroyed since April 15. Was there ever more discouraging evidence of wanton ignorance?

Are we to believe that in an institution which has been organized to instruct, no effort was made to learn the names of these nearly 500 Hawks and Owls? Can it be possible that with the means of securing exact information concerning the food of these birds, their stomach contents were not examined? Or are the instructors of the Game Conservation Institute opposed to their students finding facts which do not conform to the traditions of game-keepers? We are told that "probably every book published relating to game birds is available in the library of the Institute," and we therefore especially commend to both instructors and students Mr. Stoddard's Report on Coöperative Quail Investigation, published by the Biological Survey in 1926. Mr. Stoddard is 'finding the facts,' and if authorities of the Game Conservation Institute will follow his example and also conduct their organization on the lines laid down by the editorial to which we have referred, they will take a before unfilled and highly important place among educational institutions.

# The Audubon Societies

## SCHOOL DEPARTMENT

Edited by A. A. ALLEN, Ph.D.

Address all communications relative to the work of this department to the Editor, Cornell University, Ithaca, N. Y.

### GREEN HERON'S STORY

With Photographs by A. A. Allen, Ph.D.

At last I am here. How dark the night must have seemed to you down here on earth. I was flying high above the clouds, and what light the stars and the new moon gave was all reflected back with a silvery glow. So dense were the clouds beneath me that I doubt whether enough light penetrated to earth to show your hand in front of your face. All was clear and crisp where I was flying, and to plunge down through the clouds would have seemed like diving into a silver sea.

I kept flying, hoping to get to the end of the clouds and wishing that all might be clear by the time I should reach New York State. I left the Potomac River at dark in a misty rain and immediately climbed high to escape the clouds and to take advantage of a southerly wind at that height, and I never did see the earth again until daylight. Usually I can see the ruddy glow of the cities over which I pass, the larger streams—silver streaks in the moonlight—and the great black masses of forests, but last night all that I could see was the silvery, billowy clouds lying below me like a never-ending snowdrift.

I feared lest I fly too far and have to retrace some of my course by daylight. Fortunately, just as the sun began to tint the clouds with color, a rift appeared ahead and far below me and I caught the glint of water, a tiny white thread winding through a black landscape. I recognized the Susquehanna River and knew that I still had several hours to fly before I should reach the Finger Lakes country of New York State. So downward I directed my course and soon the rift closed above me. Gradually the details of the landscape became more clear and I recognized familiar hills and valleys, ponds and streams far below me. I no longer had to depend upon my sense of direction to guide me for I had been over this country many times before during daylight.



"IT WOULD BE HANDSOMER IF ITS NECK WERE NOT SO LONG AND ITS STOMACH SO PROMINENT."



Soon, far off to the northward, appeared a broader silver band, with another to the westward and a smaller one to the east, and I recognized my home at last, Cayuga Lake with Seneca to the westward and Owasco to the east. It is always a very happy feeling that sweeps over me when this view appears and I know my journey is almost over—that soon I will find my mate and help her raise our little ones.

I do not spend my summers on Cayuga Lake itself but on a hill-top swamp just a few miles to the south called Michigan Hollow; but often in late summer I fly down to Cayuga Lake to take advantage of the mud-flats left by the receding waters, and my children often wander off in that direction as soon as they can take care of themselves. You might think they would all start southward and thus shorten the long journey they must make in the fall, but not so; they feel that they must see the big world, north, east, south, and west, and no two of them start in the same direction. We Green Herons are not a very sociable lot anyway. Once in a while we nest in colonies where there are many good feeding-spots and but few safe nesting-places, but more often we are alone, each pair to itself, and even we mated birds do not stay together after the young can take care of themselves. We do not feel the need of others for our protection, and certainly the fishing is better when one is alone.



"WHEN FISHING I STAND MOTIONLESS, CROUCHED LOW AGAINST THE WATER,  
QUITE DIFFERENT FROM THE GREAT BLUE HERON IN THE BACKGROUND"

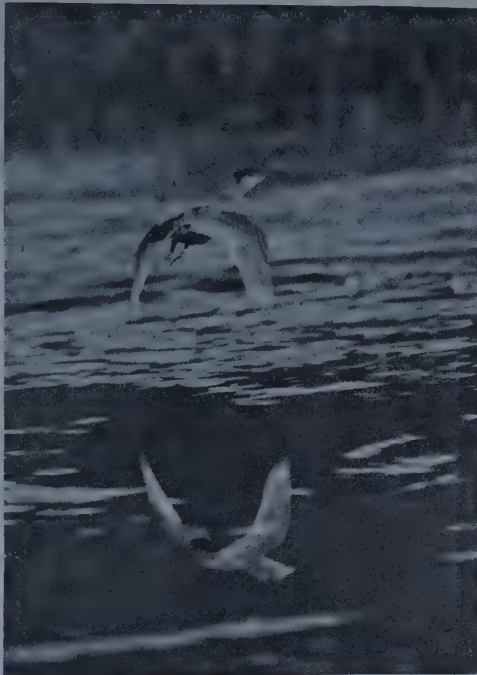
Sometimes you may see us flying long distances overland. Indeed, we frequently have to nest a mile or more from water and our fishing-grounds, and then you may mistake us for Crows for we are about the same size and usually appear black against the sky. At such times we fold our necks until our heads rest on our shoulders and you would never guess that our necks are long. Our feet trail out beyond our tails, making them appear longer than they really are and thus more Crowlike also.

More often, however, you will run upon me or my mate along the creek. You will probably not see me until I take flight, for so motionless do I stand when fishing, crouched low against the water, that even the fishes themselves do not notice me. If I get nervous, you may see me, for I cannot help flirting my tail, and when you have approached as closely as I dare let you, away I will go with a loud squawklike *skaow*. With neck outstretched, I will make for the nearest bend in the creek before stopping again to fish. If you keep following me, I will fly up the creek again and again so persistently that it sometimes gains the name for us of 'Fly-up-the-creek.' The name Green Heron is not any too good, for

only my crown and wing-coverts and tail are green, and they are such a dark green that they appear black at a little distance. Indeed, on account of my blue-gray scapulars I really look more blue than green. Then, too, my neck and breast and the sides of my head are such a rich chestnut that I look anything but green. But the other Herons have no green at all so perhaps it is distinctive.

My mate and I look almost exactly alike, except for awhile during the spring when my legs and feet become bright orange-red while hers remain yellow or greenish yellow. Our children, too, in their juvenile plumage resemble us considerably except that their colors are not so rich, and where we have one light streak down the front of the neck they have several. Their wings are, likewise, more spotted and their backs are not so blue, nor do they have as prominent crests as do we.

The first spring after our youngsters have hatched they still show some of



"WE ARE SOMETIMES CALLED  
'FLY-UP-THE-CREEK'"

these juvenile characters, and it is not until the following autumn when they molt all their feathers again that they come into a plumage like ours. We adult birds, in addition to changing all of our feathers after each breeding season, molt sufficiently each spring to get new gray plumes on our backs and longer feathers in our crests, so that we will look our very best when we start housekeeping.

Did you ever see a Green Heron's nest? It is not much to look at. Indeed



JUVENILE GREEN HERONS' NECKS ARE MORE STREAKED AND THEIR CRESTS ARE SHORTER THAN THEIR PARENTS'.

we often get tired of building and lay our eggs while you can still see through the bottom of the nest. We usually add more material later on, however, so that the nest is fairly substantial by the time the young are hatched. We seldom use anything but sticks in our nests and make no pretense at a lining, but I tell you, each one of those sticks is very carefully arranged so as to give a good hollow to the nest, and the eggs always roll toward the center when the wind blows. Sometimes we place our nests in willows or button bushes, close to the water, but again we build them high up in pine trees at long distances from the streams where we feed. It all depends upon how much we are annoyed on our feeding-grounds and what are the available nesting-places.

All true Herons lay four or five pale greenish blue eggs with no spots, and ours are no exception, only they are the smallest, being scarcely an inch and a half long, about the size of a Crow's but more elliptical.

My mate and I take turns sitting upon the eggs for seventeen days. During this time the skin on our breasts becomes greatly suffused with blood and, as in other birds, is called a 'brood-spot.' There are no feathers attached to the middle of our breasts and the bare part is normally concealed by the overlapping of the feathers on each side. When we settle on the eggs we always part the feathers so that the eggs can come in direct contact with the warm 'brood-spot.' We do not have to part the feathers with our bills because, like most birds, we have many tiny muscles under the skin attached about the base



of the feathers so that we can make them stand on end or move them as we will.

Our children, when they are small, are not handsome. Far from taking the beauty prize in any contest, they scarcely look even birdlike until they have grown their feathers. They are covered with rather long light gray down and would be quite cute if their necks were not so long and their stomachs so prominent. I hate to think that if my feathers were all picked off I should probably have the same shape.

Feathers are a great blessing. Just to look at me you would never guess that the back of my long neck is entirely bare and dependent upon the side feathers to protect it. But were it not so, I could not fold my neck so neatly on to my shoulders until it looks as short as a Crow's. Watch me crouched at the water's edge waiting for a fish. You would never suspect, any more than does the poor fish, that I can shoot out my bill for a distance of 10 inches like the flash of a gun. Then, again, when I am curious, or wish to get a better view of anything, I may stretch up my neck until I seem twice as tall as before.

Their long necks and sharp bills are often quite an asset to the children when an enemy approaches. A Crow or a squirrel, or even a raccoon, thinks twice before he ventures within range of their javelins. If they have just been fed and their gullets are heavy with food, they usually disgorge at the first sign of danger, for a Heron fights best on an empty stomach. Then, side by side, they present bayonets and dart their bills at the offender. When hard pressed they know how to beat a retreat, and even though not half-grown, they will climb out to the ends of the branches, using their little wings to balance themselves. Sometimes they hook their chins over higher branches and pull themselves upward clear to the top of the nesting tree. Occasionally they fall into the water. If they are fully feathered they can swim almost as well as a Duck, but if their feathers are not yet grown, they may sink until just their heads show. Nevertheless, they make good progress and, unless caught by a turtle or a big fish, usually make the shore or some bush where they can climb out



"OUR NESTS ARE NOT MUCH TO LOOK AT AND OUR EGGS ARE PALE GREENISH BLUE WITH NO SPOTS"

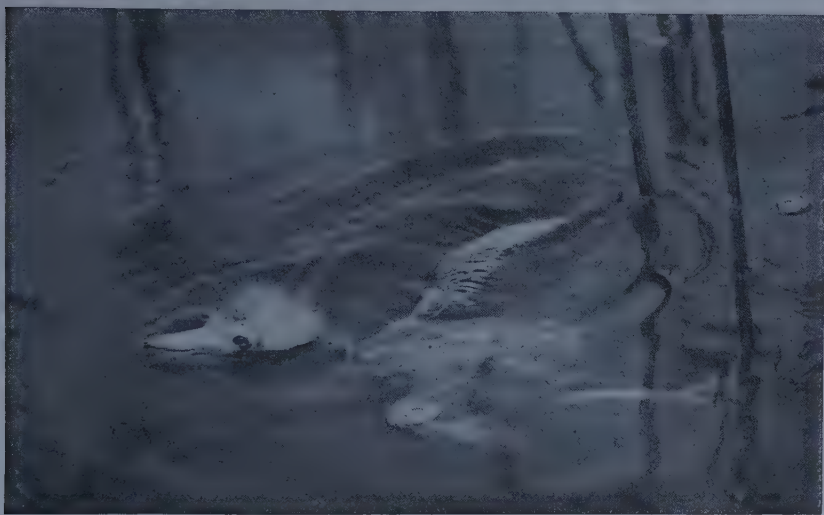


"FOR 17 DAYS WE TAKE TURNS SITTING UPON THE EGGS"



"WHEN WE SETTLE UPON THE EGGS WE ALWAYS PART THE BREAST-FEATHERS  
TO BRING THE BROOD-SPOT IN CONTACT WITH THE EGGS"

If you could watch us feed our youngsters I think it would be a great surprise to you, for we do it so differently from most birds. We usually have to travel such distances from our feeding-grounds to our nests, and our youngsters require so much food, that it would obviously be impossible for us to fly back and forth with each minnow or tadpole. Inasmuch as we cannot very well hold one fish in our bills and spear another one, we have formed the habit of swallowing whatever we catch until we have enough for a good meal for all the little ones. Our gullets are our market-baskets, and when we get back to the nest, instead of unpacking them on the kitchen table, we unload directly into the throats of the youngsters. This is called regurgitation, and it is much



SWIMMING, BUT NOT LIKE A DUCK

more satisfactory to do than it is pleasant to think about. Certainly it is more comfortable for us than the method of the Cormorants whose youngsters put their heads clear down into the throats of their parents in their search for food.

We are sometimes blamed for catching young trout, and if there were any place where there was nothing else to catch but trout we certainly would eat them before we would starve. Possibly, some of the small fish we do catch are trout, but I tell you it is a lot easier to catch minnows and killifish and tadpoles and crayfish that swim near the surface or come into very shallow water than it is to spear those little trout that hug the bottom of the pools or hide under the bank where we cannot reach. The truth of the matter is, I would just as soon have grasshoppers or water-bugs as fish, especially when they get numerous and are easier to catch. I think if anyone stopped to figure out he would find that we do much more good than harm.

Where do you suppose I spend the winter? The flight I made last night is





PRESENT BAYONETS!

but a step in the journey I make each fall and spring. I just love to travel and see new places and new birds and new animals. Some Green Herons nest as far south as Panama, and I suppose they are content to live and die in the same swamp. Every winter I join them for a while on my way to Lake Maracaibo, but I do not find them very interesting. I keep longing for the thousands of acres of marshland bordering my Venezuelan winter home and the millions of birds that congregate there. You might think that one of my disposition would not enjoy the crowds, and I don't when it is nesting-time. That's why I leave Lake Maracaibo in the early spring and start back for Michigan Hollow

Pond near Lake Cayuga. But how you would enjoy the bird-life on Lake Maracaibo, that is if you did not mind the insects. Thousands of Herons of all kinds, Ibises, Spoonbills, Jacanas, Little Grebes and big Muscovy Ducks, Tree Ducks by the tens of thousands, and great Screamers soaring overhead like Buzzards or marching around the marshes like Turkeys. There are some of your friends from up north also—Blue-winged Teal, Sora Rails, and Least Bitterns, but, like myself, lost in the great crowd. Then there are the hordes of crocodiles and droves of great capybaras looking like enormous guinea pigs but behaving more like muskrats. Snakes are rather scarce, for which I am thankful. There are not nearly as many as in the swamps of Mississippi and Louisiana where I sometimes stop on my way north. The waters teem with little fishes and aquatic insects, it is a wonderful place for a Green Heron while it lasts. But as soon as the days begin to get a bit longer in February I feel that irresistible feeling to move northward again. I tire of the crowds of other birds and the incessant gabble and long for that quiet little pond at Michigan Hollow. Finally the urge to move becomes too strong and off I start about an hour before sunset on my way to Panama, Costa Rica, Honduras, and southern Mexico. Then for a long hop across the Gulf of Mexico and I am safe in the Louisiana marshes. Then Mississippi, Alabama, Georgia, South Carolina, North Carolina, Virginia, Maryland, Pennsylvania and finally New York State and the little pond on the hills near Cayuga Lake. Oh, it is good to be back once more!



"WHEN I AM NERVOUS I CANNOT HELP FLIRTING MY TAIL"  
(The motion records as a blur in the photograph)

## QUESTIONS

1. Does the Green Heron migrate by day or by night?
2. Describe the adult plumage of the Green Heron, male and female.
3. How do the juvenile Green Herons differ from the adults?
4. When do the Green Herons molt? Are both molts complete?
5. Do Green Herons migrate or live in flocks?
6. Do they ever nest in colonies?
7. What does a Green Heron in flight resemble? How do you explain this?
8. What are some of the other common names of the Green Heron?
9. What is the method of fishing of the Green Heron?
10. Describe a Green Heron's nest. Where is it placed?
11. Describe a Green Heron's eggs.
12. What is the period of incubation?
13. Do both male and female Herons incubate?
14. What is the 'brood-spot'?
15. What other places on a Green Heron are free from feathers?
16. Describe the appearance of young Green Herons shortly after hatching.
17. How do they behave at the approach of an enemy?
18. How does a Heron climb?
19. Can an adult Green Heron swim? Can a young one swim?
20. How are young Green Herons fed?
21. What is the food of the Green Heron?
22. What is the economic status of the Green Heron?
23. What is the breeding range of the Green Heron?
24. What is the winter range?
25. Name some of the associates of the Green Heron at its winter home.

## ARIZONA WOODPECKER

(See Frontispiece)

## Life History and Identification Chart

1. Summer Range: An uncommon bird found in the mountains of southwestern New Mexico and southern Arizona southward into Mexico, from 4,000-8,000 feet altitude.
2. Winter Range: Probably a permanent resident wherever found.
3. Preferred Habitat: The live oak forests.
4. Calls: Apparently not recorded.
5. Food: Insects and their larvæ, but does little boring.
6. Economic Status: Entirely beneficial so far as known.
7. Nest: A cavity drilled in a dead tree or branch 10 to 20 feet up, especially in oaks, maples, sycamores. The opening is about 1½ inches in diameter and about a foot deep.
8. Eggs: Three or four, glossy white, smaller than Robins' laid in May.
9. Recognition Marks: Slightly smaller than a Hairy Woodpecker, with plain blackish brown upperparts and spotted lower parts. The absence of stripes or bars on the upper parts is quite distinctive.
10. Distinctive Habits: Rather shy for a Woodpecker; often travels in troops except when nesting. Usually starts at the base of a tree and works upwards like a Brown Creeper.



**RED-COCKADED WOODPECKER**

(See Frontispiece)

1. Summer Range: Southeastern United States, north to North Carolina and westward to eastern Texas.
2. Winter Range: Probably a permanent resident wherever found.
3. Preferred Habitat: Seldom found away from the pines and particularly the long-leaf pine, spending most of its time among the upper branches.
4. Calls: Rather petulant, suggestive of a Nuthatch or again the peeping of a young bird. I have not heard it drum but it doubtless does like a Downy or Hairy Woodpecker.
5. Food: Largely insects, especially ants, spiders and beetles, some wild fruits and seeds.
6. Economic Status: Entirely beneficial in its food habits.
7. Nest: A cavity excavated usually in a living pine that has a decayed heart, from 20 to 50 feet up. The opening is less than 2 inches in diameter and from 6 to 10 inches deep and sometimes cuts through 6 inches of hard wood before it turns downward. The birds usually tap the tree for a foot or more above the hole causing the pitch to flow and perhaps thus protect the nest from marauding squirrels.
8. Eggs: Glossy white, two to five in number and about the size of Sparrows'; laid in late April or May.
9. Recognition Marks: A bird about the size of a Downy Woodpecker but with the back barred, the top of the head solid black, and the breast spotted.
10. Distinctive Habits: Often in small flocks, feeding head downward on the tip ends of the branches of the living pines, like a Nuthatch or a Chickadee.

**FOR TEACHERS AND STUDENTS****A HELPFUL SCHOOL MUSEUM**

A school museum, acquired by searching out and collecting the scattered mounted specimens of birds that are privately owned in almost any community, gives a tremendous impulse to the interest in nature-study. At the same time, since there is no sacrifice of bird-life for the purpose, the principles of conservation and protection do not suffer.

The P. K. Yonge Grammar School, of Pensacola, Fla., founded its museum—shown in the accompanying photograph—upon the gift of an ant-eater and an armadillo, first loaned in connection with a lesson on the geography of South America. A local taxidermist offered a few mounted birds. The Parent-Teachers Association of the school, feeling the stir of interest, purchased for a small sum the collection of a retired taxidermist in a neighboring city. Other material was loaned or given. Thus, the museum, unequaled among the schools of Florida, now comprises 65 specimens of birds representing 50 species, besides several mammals, reptiles, and butterflies, many seashells, and some miscellaneous items.

Additions come in frequently. Every spring and fall, children bring in bird victims of migration accidents. Every summer, empty nests, taken after



MUSEUM OF THE P. K. YONGE GRAMMAR SCHOOL, PENSACOLA, FLA.

their broods had flown, are brought in, each one with a history of breathless interest by the child who had watched it from its first construction to its final abandonment.

Visits from other schools in the city and county, as well as from adjoining counties, have extended the museum's sphere of influence; and the cause of bird-protection is more firmly established in the minds of the youth of this community than could have been possible without the added impulse given by the museum.—FRANCIS M. WESTON, *Pensacola, Fla.*

[It is unfortunate that the great mass of adults as well as children have to be inspired to study birds out-of-doors. So long as this is true, a local museum, especially one in connection with the schools, is of great value in introducing to the community the great interest which nature holds for the observant. An interest in nature is one of the greatest assets which can be given to a child, and many of the most prominent figures in the history of our country have retained the love of nature first inspired by a local museum.—A. A. A.]

### CARDINAL'S NEST, EGGS, AND BABY BIRDS

On April 21 of this year, my sister and I were hunting birds' nests. We had found nests of a Blackbird and a Loggerhead Shrike a few days before this date, but we wanted to find a nest of a prettier bird than these. So we were hunting around the bushes in a field when my sister saw a nest and we crept

up to it. When we were within arm's reach of the nest, a female Cardinal flew out and lit on a bush not far away and began to scold. Soon her mate came up and began scolding, too. I went up to the nest, which was no more than  $4\frac{1}{2}$  feet from the ground in a low bush, and looked in. There were three almost white eggs with light brown speckles on them. I then left the nest, not wishing to disturb the parent birds further.

On April 25, they were hatched, so they must have been laid some time before we discovered them. The young birds were the most helpless creatures I ever saw; they were a soft, wet gray. On May 5, our neighbor's cat caught the male bird, so then the female had to raise the brood herself. The next day (May 6) the young left the nest and for a few days we only caught glimpses of them now and then. About a week and a half after they left the nest, one of the baby birds flew to our front hedge and the other two stayed by the nest, which was quite a long ways off, so the poor mother bird was on the jump all the time, going back and forth guarding the three. I sat on the porch watching the birds. On one of the occasions when the mother wasn't with the bird in the hedge, a Loggerhead Shrike flew into the hedge and I ran out, but both the baby and Shrike were gone. I naturally thought the Shrike had carried it off, but after quite a long time I saw them again, and they were as big as the mother. Two were still gray and the other was about the color of the mother. We never knew how the third escaped, but I suppose it flew away when the Shrike entered the hedge.

The nest is  $4\frac{1}{2}$  inches across from one outside edge to the other and  $2\frac{3}{4}$  inches across from one inside edge to the other and  $1\frac{3}{4}$  inches deep. The foundation is made of small twigs and Spanish moss, a piece of yellow wool and a few other odds and ends. The superstructure is made wholly of dried palmetto leaves, woven like a basket, and I don't see how they did it so evenly. The lining is made of dry dross. It is the sturdiest little nest I've ever seen.—WEDELL ROLLOSON (age, 12 years), *Ft. Myers, Fla.*





# The Audubon Societies

## EXECUTIVE DEPARTMENT

Edited by T. GILBERT PEARSON, LL.D., President

Address all correspondence, and send all remittances, for dues and contributions, to the National Association of Audubon Societies, 1974 Broadway, New York City. Telephone, Trafalgar 2077

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SAMUEL T. CARTER, JR., *Attorney*

Any person, club, school or company in sympathy with the objects of this Association may become a member of it, and all are welcome.

Classes of Membership in the National Association of Audubon Societies for the Protection of Wild Birds and Animals:

\$5 annually pays for a Sustaining Membership  
\$100 paid at one time constitutes a Life Membership  
\$1,000 constitutes a person a Patron  
\$5,000 constitutes a person a Founder  
\$25,000 constitutes a person a Benefactor

FORM OF BEQUEST:—I do hereby give and bequeath to the National Association of Audubon Societies for the Protection of Wild Birds and Animals (Incorporated), of the City of New York.

## JUNIOR AUDUBON CLUB WORK

Among the various activities of the Association it is doubtful if any has been more fruitful, through the years, than the educational work among the children. Some will recall that this was begun in 1910 when, through the generosity of Mrs. Russel Sage, a campaign of education was undertaken in the schools of the South when the killing of Robins in large numbers was quite prevalent.

Since that day, nineteen years ago, this work has continued to grow in popularity and usefulness until it has spread to every state of the Union, including the District of Columbia, Alaska, Porto Rico, and Hawaii, also Chile and Japan.

The number of Educational Leaflets which form the basis of the Junior Club work is constantly being increased until at the present time 140 subjects of common North American birds are available. These are furnished to teachers and children at actually one-half the cost of publication and distribution. This has been made possible through the generosity of members and friends of the Association. Regularly each year a \$10,000 check from our 'unknown

benefactor' continues to be received. When to this generous gift there is added the numerous smaller contributions, a fund sufficient annually to supply approximately 350,000 school children with bird-study material has been made available.

As in previous years, the Association's Field Agents have been active. Mrs. Sage has continued her work in Long Island; Miss Hurd, in Connecticut; Mr. Job, in South Carolina; Mr. Esten, in Indiana; Mr. Bruestle, in Maryland; and Mrs. Wingo, in Georgia.

In addition to these loyal workers, the Association was enabled to employ, during a portion of the year, H. W. McGowan who spent several months working in the schools of Alabama; also J. P. Jensen who devoted a portion of his time to forming Junior Audubon Clubs in Minnesota. The California and Massachusetts Audubon Societies also continued their active support by the organization of Junior Clubs in their States.

The following statement shows the distribution of Junior Audubon Clubs and members enrolled during the school year of 1928-29.



JUNIOR AUDUBON CLUB OF 444 MEMBERS, FORMED SPRING OF 1929 IN  
BARKER SCHOOL, BIRMINGHAM, ALABAMA



THIS IS RICHARD HOURD, PUPIL LEADER OF THE 19 AUDUBON SOCIETIES OF THE  
MARR SCHOOL, DETROIT, WHICH HAVE MORE THAN 500 MEMBERS, INCLUDING BOTH  
PUPILS AND TEACHERS. THE MARR SCHOOL GROUP IS INTENSELY INTERESTED IN  
THE CONTEST THAT WILL LEAD TO THE SELECTION OF MICHIGAN'S STATE BIRD.

Annual Summary of Junior Audubon  
Clubs and Members Enrolled Under  
the Children's Educational Fund,  
Ending June 1, 1929

States	Clubs	Members
Alabama	119	5,032
Alaska	2	66
Arizona	14	467
Arkansas	18	747
California	349	14,885
Colorado	73	3,097
Connecticut	390	16,882
Delaware	21	706
District of Columbia	11	395
Florida	51	2,376
Georgia	140	5,027
Idaho	17	757
Illinois	390	15,834
Indiana	439	17,290
Iowa	153	6,490
Kansas	75	2,850
Kentucky	87	3,323
Louisiana	76	2,533
Maine	37	1,755
Maryland	239	10,198
Massachusetts	310	12,726
Michigan	275	11,680
Minnesota	254	10,293
Mississippi	19	674
Missouri	103	4,668

States	Clubs	Members
Montana	31	1,259
Nebraska	67	2,051
Nevada	8	320
New Hampshire	47	1,839
New Jersey	260	11,605
New Mexico	22	774
New York	1,053	47,266
North Carolina	81	3,000
North Dakota	55	2,431
Ohio	527	21,284
Oklahoma	46	1,807
Oregon	126	5,994
Pennsylvania	717	32,528
Rhode Island	13	595
South Carolina	261	9,460
South Dakota	30	1,426
Tennessee	23	842
Texas	122	4,723
Utah	49	1,741
Vermont	17	718
Virginia	76	3,189
Washington	67	3,203
West Virginia	101	4,079
Wisconsin	155	6,630
Wyoming	8	367
Canada	672	26,874
Chile	1	38
Hawaii	3	98
Porto Rico	7	357
Totals	8,307	347,849



DEDICATION OF BIRD-BATH, CHATHAM JR. HIGH SCHOOL, SAVANNAH, GA. PRESENTED BY BONAVENTURE CHAPTER, DAUGHTERS OF AMERICAN REVOLUTION, TO COMMEMORATE THE FIRST ACADEMY IN SAVANNAH. CEREMONIES WERE HELD FRIDAY, MAY 31. PRESENT: PROF. STRONG, SUPERINTENDENT OF SCHOOL BOARD; DR. GALLWAY, PRINCIPAL; MRS. J. E. WINGO, FIELD AGENT NATIONAL ASSOCIATION OF AUDUBON SOCIETIES TEACHERS AND OTHERS.



## A LITTLE JOURNEY TO TEXAS

By ALDEN H. HADLEY

It was in 1918 that Dr. T. Gilbert Pearson, while studying bird-life on the Texas coast, discovered a colony of several thousand Reddish Egrets breeding on Green Island in Laguna Madre. These birds for twenty years prior to this discovery had been regarded by many as extinct as a breeding species within the boundaries of the United States.

Green Island lies in Laguna Madre about 35 miles north of Point Isabel, and is an ideal nesting-place for these and the other five species of Egrets and Herons which are associated with them. It consists of about 40 acres and is clothed with a dense and almost impenetrable growth of mesquite and ebony, together with a goodly sprinkling of cactus and yucca.

Shortly after Dr. Pearson's discovery of this marvelous rookery, the General Assembly of Texas, without solicitation, officially leased Green Island, together with a group of other islands, to the Audubon Association for a term of fifty years, to be administered by it as a bird sanctuary.

During the last week of April, 1929, it became the privilege of the writer, in company with John O. Larson, warden in charge, to visit these island sanctuaries in order to study conditions and to continue arrangements for their protection.

As soon as our Mexican boatmen had dropped anchor in the shoal water on the west side of Green Island, I waded ashore with Larson who quietly led me along the winding trails cut through the dense, scrubby growth. I was quite unprepared for the sight which greeted my eyes. Climbing into a look-out built in one of the large mesquite trees, my vision took in, almost at a glance, the island's area. It seemed almost as if the cacti and the yuccas, which at this season are wont to flaunt their charming flowers, had not alone been content with this quiet efflorescence, but had suddenly burst abloom with thousands of exquisite blue and white Egrets. It was a scene long to be remembered. In this great congregation of birds six species were represented. The Reddish Egrets numbered at least 5,000. Probably 99 per

cent of them were in the blue phase of plumage; in fact, only 13 of them were seen in the white plumage. Next in order of numbers were Louisiana Herons, Snowy Egrets, Ward's Herons, Black-crowned Night Herons, and American Egrets.

As the short twilight deepened into night, the birds continued to come into the island from their extensive feeding-grounds, and as we strolled back along the winding trails the air was full of a strange and indescribable medley of guttural sounds, of subdued croakings and squawkings. This city of the Egrets and Herons was lapsing into slumber, yet ever and anon one could distinguish the liquid, gurgling *ä-wäs* or *lä-lüs* of the Reddish Egret, the guttural deep-toned *squawks* of the Ward's Herons, and ever more frequently, as the darkness deepened, the clear-cut *quawks* of the Black-crowns as they came in from their foragings.

To the ornithologist, Green Island is truly one of the most interesting spots in North America. In addition, my visit here in the lower Rio Grande Valley contained many of those pleasant thrills experienced by a bird-lover who for the first time is privileged to see in the flesh numbers of birds which he has before known only in museums or from books.

The delightful hospitality which in Texas everywhere was experienced at the hands of officials of the State Game Commission and of the Izaak Walton League, and many others interested in the cause of wild-life conservation in that great Commonwealth, will not soon be forgotten.

At Austin I met and had a pleasant visit with William J. Tucker, the very able and progressive Game and Fish Commissioner, also with J. G. Burr, Director of Research and Education, who had personally arranged to have me speak in the high school auditorium.

At Dallas I received cordial welcome in the home of Mr. and Mrs. R. A. Gilliam. On their beautiful bird-sanctuary grounds it was my privilege to give an illustrated address one evening to a group of, perhaps, 500 people. Mr. Gilliam is a Life Member of the

Association and for many years has been an indefatigable and loyal champion of the cause of bird-protection in Dallas and its environs. Largely through his efforts the attitude toward bird-life has been entirely changed in his home city.

Next came a visit to McKinney where I had been invited by Dr. and Mrs. Clifford G. Weaver to address a group in the church of which Dr. Weaver is pastor. I here had an audience of between 300 and 400, and later was most graciously entertained in the manse. Mrs. Weaver is a writer, well known not only in her own state but elsewhere.

Other speaking engagements were at the Hackaday Girls' School in Dallas and before the local Chapter of the Izaak Walton League at Mission, in the Rio Grande Valley. Here I met Charles G. Jones, newly appointed State Supervisor of Deputy Game Wardens, through whose kindness I was taken, the

following day, by one of his wardens on a 250-mile trip by auto through the southern tip-end of the million-acre State Game Refuge recently established on the great King Ranch.

The particular thrills of this trip were Red-billed Pigeons, Chestnut-bellied Scaled Partridges, numbers of Wild Turkeys, and White-faced Glossy Ibises.

It was pleasant to visit San Antonio where I had been invited by C. A. Wheatley, State President of the Izaak Walton League, to speak on the occasion of the Annual State Convention. Here I met Mrs. Ellen Schultz Quillen, Director of the Witte Museum and Supervisor of Nature-Study for the city schools. She and many others whose interests and enthusiasms run in similar channels, are helping forward tremendously the nature-study and conservation movement in the great Lone Star State.

## NEWS AND NOTES

### Second Bulletin of the International Committee for Bird Preservation

There recently has been compiled and edited in the offices of the Association the second official report of the International Committee for Bird Preservation. During the month of June this was published in the form of a 54-page Bulletin in an edition of 18,000 copies.

The Bulletin grew out of the Committee's third biennial meeting held in May, 1928, in Geneva, Switzerland. It gives a brief account of the Geneva meeting and contains a "Foreword of History," also "The Declaration of Principles" and Resolutions adopted. In addition, there is the address of Chairman Pearson to the delegates assembled, also reports on the status of bird-protection and bird-protective laws from twelve of the twenty countries now represented on the Committee, which has a total personnel of 165 members.

A most casual reading of these reports reveals not only a wide degree of variation in the bird-protective laws of the different

countries represented, but also an urgent need for constructive international action and coöperation if the wild-bird life of the world is to be preserved.

In spite of all the efforts of the bird-protectionists of Europe to effect a general treaty such as exists between the United States and Canada, nothing approaching that action has as yet been obtained, as the Paris Treaty of 1902 has not been adopted by many European countries. Conditions are indeed deplorable, for millions of migratory song- and game-birds which find fairly adequate protection in northern Europe are slaughtered ruthlessly in the countries of southern Europe while on their migratory flight. When to this enormous killing there is added the incentive to sell both song- and game-birds on the open market, the conditions become all the more deplorable.

The next official meeting of the International Committee will be held June, 1930, in Amsterdam, Holland, in connection with the convening of the International Ornithological Congress.



WILD SWANS AND OTHER WATER-FOWL IN THE HARBOR OF LANDSKRONA, SWEDEN, DURING SEVERE WINTER OF 1928-29

Courtesy of G. Paulson and Sven Hörstadius

### The Bounty Law Again

Attempted bounty legislation is continually coming forward. Lately, a bill calling for a bounty of 3 cents on 'Blackbirds,' was presented to the Legislature of Wisconsin. The bill was introduced by the Chairman of the Committee on Agriculture and was referred to his committee. It was reported back and its passage recommended, and our informant stated that in all probability it would be passed.

However, a heated debate arose in the House over the question of what is a 'Black-bird,' since, according to one Assemblyman, a number of species were classed as 'Black-birds.' The bill was accordingly killed by a vote of 40 to 19.

Still another example of an attempt at misguided legislation was recently revealed through a telegram received from a friend of the Association who resides in the above-mentioned state, informing us that an effort was being made to have a bounty placed upon the Great Blue Heron! The sponsors

of this movement doubtless were unaware that this splendid bird, together with all its family, are protected under the Federal Migratory Bird Treaty Act.

Another recent example of the unintelligent and misguided zeal which now and then leads sportsmen's organizations to sponsor a wholesale war of extermination upon every creature which they are led to believe is inimical to their own interests, has just been brought to our attention.

A Fish and Game Club of New York State, in planning its program for the present year, had included as its major activity "a vermin eradication contest." Among the twelve species of birds and animals against which the Club had planned destruction are 'Cranes' (by which doubtless is meant Great Blue Heron), Bitterns and all Owls.

Now the Great Blue Heron and the Bittern are protected under the Federal Migratory Bird Treaty, although the bird-protective law of New York State, with singular inconsistency, lists them among unprotected species. In such unfortunate



cases of conflict between Federal and state law, of course, the Federal law is supreme.

It is also interesting to note that, although all Owls were slated for destruction by this Club, all the species of this family are protected by the law of New York State with the exception of the Snowy Owl, Great Grey Owl, and Great Horned Owl.

It is much to the credit, however, of the Fish and Game Club in question that upon being informed by a letter from this office of the legal status of the birds above mentioned, a very cordial and appreciative reply was received. The letter was even apologetic in tone and indicated that efforts would be made to undo whatever harm had been done by giving publicity to the intent to kill these birds which they had mistakenly believed to be unprotected.

Verily the fight for bird-protection is not yet won!

#### The Problem of Destructive Birds in Australia

A recent article in the *Emu* on 'The Economic Value of Birds' by Lance Le Souef, R. A. O. U., presents in a graphic manner the necessity for careful scientific studies of the food-habits of birds before their true economic status can be determined.

It appears, from Mr. Le Souef's paper, that Australia has even more than her share of problems to work out in connection with the relationship of some of her native birds to agriculture and to stock-raising.

The following quotation serves as a good illustration of the point in question:

"From the economic standpoint, the Wedge-tailed Eagle (*Uroæetus audax*) is probably the most important of all the birds and it appears to be the least understood. All over the continent a price is put on its head because it is reputed to kill sheep and lambs. Thousands of Eagles are destroyed annually because of this charge. My own experience, in a district where Eagles were in hundreds and lambing ewes in thousands, is that I have yet to see an Eagle attacking a live sheep. The sheep-owner's stand in the matter is logical—he is naturally adverse to having on his property a bird that is

capable of killing his stock. However, there is another side to the question in that the bird of prey helps to keep kangaroos and rabbits in check, and also to get rid of carcasses, which would otherwise serve as breeding-grounds for blow-flies. Could any sheep-owner prove the fact that Eagles kill 100 healthy sheep a year out of the one hundred million available? It appears that the matter should not be left haphazard to the flock-owners to decide, but should be investigated from its economic standpoint in the interests of the country generally.

"The Crow is another bird whose true economic position requires careful investigation. It is Australia's natural scavenger, patrolling the whole continent, cleaning up any refuse it can find. In settled districts this bird has developed, it is said, the objectionable habit of picking out the eyes of living sheep and lambs. With this factor against it, no one can hold a brief for the Crow, for no sheep-owner is prepared to see animals suffer without thirsting for vengeance. But the economic factor must not be lost sight of as the birds appear to be of marked value in other directions, and probably only a small minority do any actual damage. As the lambing season is short, it is suggested that it would pay to give the sheep special protection during this period, and even feed the Crows on culled animals instead of killing them, so that the value of their services in other directions and at other times would not be lost.

"So far as the sheep industry is concerned, the outstanding trouble is the blow-fly, and here again the bird question comes into the picture. Conflicting reports are available as to the value of the Starling in destroying the blow-fly. What is the food of millions of Starlings? Flocks can be seen in the potato and other crops where they certainly appear to be working in the farmer's interests."

#### Biological Survey Forms New Division

A new department which will be known as the Division of Land Acquisition recently has been created in the Bureau of Biological Survey. It is headed by Rudolph Dieffenbach and began to function July 1, 1929.

Those familiar with recent happenings in the field of wild-life conservation will at once sense the meaning of this action. It will be recalled that the main purport of the Migratory Bird Conservation Act, which was signed by President Coolidge on February 18, is the acquisition, through purchase, gift, or lease, of areas of land suitable for sanctuaries for our much harassed wild water-fowl. Our treaty obligations with Canada, assumed in 1918, increasingly have made it the duty of our Government to take some such far-reaching action as is embodied in the Migratory Bird Conservation Act.

With the rapid developments everywhere taking place in our country, it is becoming clearer every day that if suitable breeding- and feeding-grounds for our wild fowl are to be provided, no time must be lost in their acquisition. Indeed, those most familiar with conditions affecting our Wild Ducks and Geese feel that much valuable time has already been lost and that such a program should have been initiated years ago.

The field-work of the newly created division will be carried on throughout the United States and Alaska. Mr. Dieffenbach brings to his office an experience and training which will well qualify him for his task. Since 1925 he has been a land-valuation engineer of the Biological Survey, and for a period of thirteen years prior to that time had been connected with the U. S. Forest Service, engaged in surveying and appraising lands.

#### Texas Makes Forward Step

Two measures which recently were passed by the Texas General Assembly represent notable advances in the cause of conservation.

The first creates a non-salaried commission of six members as a governing board of the Game and Fish Commission.

The newly created form of administration will not become operative until September 1, 1929, when the six Commissioners appointed by the Governor will take charge and appoint an Executive Secretary and an Assistant, upon whom will rest the duty of carrying out the policies of the Commission.

This form of organization ought largely to do away with political control and thus make it possible to carry out continuing policies, since the Commissioners serve for a period of six years, two of them retiring every two years unless reappointed.

The other measure, although wholly pertaining to commercial fisheries, is of interest to ornithologists and bird-lovers since several attempts have been made by the commercial fishermen of Texas to have enacted by the General Assembly a law calling for a bounty on Pelicans, the theory being that these birds are directly responsible for the decline of fisheries.

The measure to which allusion is made prohibits the use of drag-seines in the bays and lagoons of the Texas coast. It is interesting to note that this piece of legislation amounts to a confession on the part of those responsible for it that the commercial fishermen, by reason of their wasteful and destructive methods, have themselves alone to blame, and not the fish-eating birds, for the decline of their fisheries.

This subject was more fully discussed in this Department of the September-October issue of 1927, in an article entitled 'Commercial Fisheries vs. Fish-Eating Birds.'

#### Marshlands Disappearing

Recently there has been much discussion concerning the rapid disappearance of marshlands and the resultant disastrous effects upon migratory water-fowl.

In this connection it is interesting to note a statement occurring in the June number of the *Associated Sportsmen*, the official publication of the Associated Sportsmen of California.

The statement is made that within the last few years the areas of marsh- and swamp-lands adapted to the needs of water-fowl have decreased in California from 700,000 acres to a pitiful remnant of 100,000 acres.

The two great evils resulting from this situation are, of course, the necessarily increasing concentration of water-fowl which leaves wholly inadequate feeding- and nesting-grounds. The other, according to the editorial, is the progressive acquisition

of the most desirable areas by wealthy sportsmen and the exceptional opportunities that are thus afforded for big bags.

### A Glee Club and Egret Protection

Among the Association's loyal friends of long standing we are pleased to make mention of the Glee Club of Milwaukee, Downer

College, Wis. This Club regularly each spring since 1913 has made a contribution to the Association's Egret Protection Fund—sixteen contributions in all.

This token of interest in the Association's work is all the more appreciated since the money contributed represents a silver offering given on the occasion of Annual Nature Concerts arranged by the Club.

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GOLDEN PLOVER

Order—LIMICOLAE

FAMILY—CHARADRIIDAE

Genus—CHARADRIUS

Species—DOMINICUS

National Association of Audubon Societies